

# Recommended on $Google^{\mathsf{M}}$

### We read the news today, oh boy: It's The Beatles, on Google Play Music

No need for fussing or fighting, my friend. Now you can live on a Yellow Submarine, march in Sgt. Pepper's Lonely Hearts Band or go to Strawberry Fields Forever. Starting on December 24, all 13 of The Beatles' iconic original albums, plus four essential Beatles collections, will be available to stream on Google Play Music—enough music to fill up eight days a week.

The best-selling band in history, with 20 number one Billboard Hot 100 hits, The Beatles continue to be one of the world's most beloved bands decades after their last original album. So, what lyrics take a sad song and make it better? What albums get you through a hard day's night? Come together, right now, to take a look at some of the top Beatles searches, according to Google Trends.





Bonus: If you open up the Google app on your Android phone and say "Ok Google, play the Beatles," There will be an answer. Let it stream.

In the words of Ed Sullivan: "Ladies and Gentlemen, The Beatles!"

Posted by Gwen Shen, Music Partnerships, Google Play

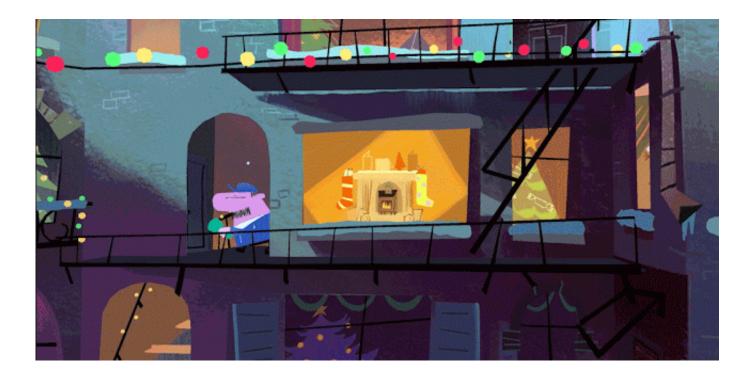
IMAGE URL Gwen Shen Music Partnerships Google Play

### #SpecialDelivery: Google Spotlight Stories come to YouTube with interactive 360-degree storytelling

A humble caretaker is surprised when a mysterious stranger causes mischief on the roof. He investigates, but can't seem to catch even a glimpse of the troublemaker. And so the chase goes... room to room... up and down... The stranger remains just out of sight, leaving behind only a trail of gifts...

Meanwhile, you're following the action at your own pace, from whatever angle you please—behind you, to your left, to your right, or in front of you. All on your mobile phone.

Today we're bringing Google Spotlight Stories to YouTube with "Special Delivery," an original short film made by Academy Award-winning animation studio Aardman Animations (Wallace and Gromit fans, take note), viewable on the YouTube app on many Android devices.



"Special Delivery" is the latest of several Spotlight Stories to come out of Google ATAP (our Advanced Technology and Projects group). With Google Spotlight Stories, your phone becomes a window to a story happening all around you. The sensors on your phone allow the story to be interactive, so when you move your phone to various scenes, you unlock mini-stories within the story.

We didn't want anyone to miss Aardman's "Pink Panther"-style holiday caper! So we also made a YouTube 360 version for other Android devices, iOS devices, and the web. You can find both versions of "Special Delivery" on the Spotlight Stories YouTube channel, and you can also watch with Google Cardboard. Next year, we'll bring Google Spotlight Stories to more Android devices and the YouTube iOS app.

You'll want to watch "Special Delivery" a few times to find all the surprises within the story. In the full

interactive experience, you'll encounter 10 subplots, three potential ways to view the ending, and 60+ moments where you can decide to follow the story in different ways. Each viewing is unique. We don't want to spoil the ending, so that's all we'll say for now...

Posted by Rachid El Guerrab, Technical Project Lead, Spotlight Stories, Google ATAP

http://3.bp.blogspot.com/-mbUAzRH7Bao/VnjmzqSrsjl/AAAAAAARm8/Sj0CZl2NS3g/s1600/SLS\_S pecialDelivery\_Twitter\_1.gif Rachid El Guerrab Technical Project Lead, Spotlight Stories Google ATAP

### **ICYMI: A few stocking stuffers from around Google**

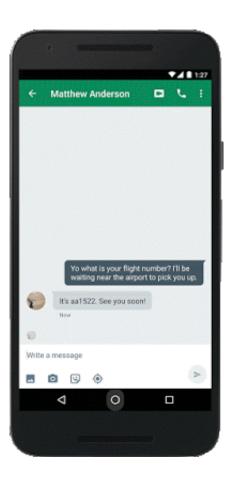
Between last-minute gift shopping, airport pickups, cookie baking, and ugly-sweater parties, there's a lot to do this season. So you may have missed a few updates from around Google that can actually make your holiday season a little brighter (or at least make your to-do list go a little faster. Won't make your sweater any less ugly, though). Here's a look at what we've unwrapped recently:

### Add this one to your to-do list: Reminders in Google Calendar

Whether it's "send holiday cards" or "use up FSA," you can now add Reminders to Google Calendar to help you complete your to-do list. These aren't like those calendar entries you create yourself that you plain-old ignore completely and that then disappear. With Reminders, if you don't complete the task and dismiss the Reminder, it'll pop up on your calendar again the next day. And the next. And the ... until you can't take it anymore and just send those holiday cards already. You'll thank us when your list is checked off. Twice.

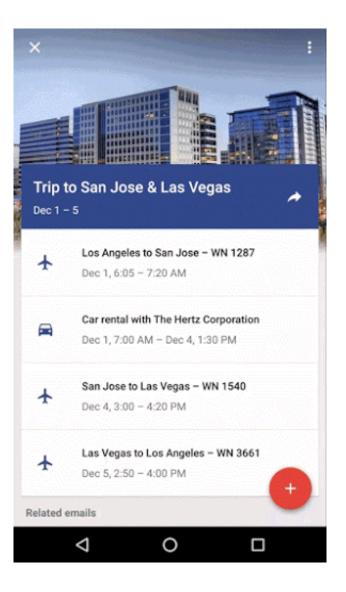
### Now on Tap gets handier for the holidays

Now on Tap helps you get quick information without leaving the app you're using by tapping and holding the home button on Android phones—and <u>new updates</u> make it even handier for the holidays. So if you get a text with your cousin's flight number, you can tap and hold to see the flight's status, then respond without having to juggle between searching and texting. If you ordered a gift online and want to know if it will make it down the chimney and under the tree on time, tap and hold your confirmation email to get tracking info. Consider it your own personal Santa's Little Helper.



### Tell the family when to expect you with trip bundles

There's probably a lot going on in your email right now if you've got an upcoming trip home or holiday getaway planned. From your flight confirmation to rental car details, Inbox by Gmail already groups these emails into trip bundles so you can find everything you need for your trip quickly. Those bundles just got even more useful—you can now access them offline (good for on the plane), share the trip summary with friends or family, and add other pertinent emails (like that message with your aunt's new address) to the bundle.



### Templates in Google Docs go mobile

If you're collecting family recipes or planning a trip, templates in Docs, Sheets and Slides help you get started faster, so you can spend more time concentrating on the words you're writing and less time worrying about how it looks. These pre-made templates are now available on Android and iOS so you can do more while on the go. Ho, ho, ho!

Posted by Abbi Tatton, Google Editorial Elf IMAGE URL Abbi Tatton Editorial Elf Google

### YouTube and NBC News present Democratic primary debate in South Carolina

From presidential candidates launching their campaigns, to YouTube creators discussing issues that matter to their communities, to light-hearted moments along the campaign trail, you've already been following the 2016 U.S. election from multiple angles on YouTube.

Now you can watch the candidates debate on YouTube, too.

Next month, we'll join together with NBC News to present the final DNC sanctioned Democratic presidential debate before the first caucus and primary votes are cast—with the action live streamed on YouTube. The NBC News-YouTube Democratic Candidates Debate, hosted by the Congressional Black Caucus Institute and moderated by Lester Holt, will take place on Sunday, January 17, 2016, in Charleston, S.C., airing on NBC from 9-11 p.m. ET and streamed live on the NBC News YouTube channel.

With so many YouTube fans following this election closely, of course there will be an opportunity for you to get involved. Along with Google Trends data, the debate will feature questions from the YouTube community. Look out for more information on how you can engage in the coming weeks.

Since 2005 you've made YouTube a home for global politics, and today you watch more than 5 million hours of news on YouTube every day. Over the course of 2016, you'll be able to find all of the major election moments unfold on YouTube—tune in to the NBC News YouTube channel January 17 to kick off the election year.

Posted by Brandon Feldman, YouTube News, and Steve Grove, Google News Lab IMAGE URL AUTHOR NAME AUTHOR TITLE AUTHOR TEAM

From devastation to empowerment and tragedy to hope, our 15th annual Year in Search uncovers the moments that captured the world's hearts—and questions that revealed who we are. From "How can I help Nepal" to "How can the world find peace?" here's a look back at 2015, through the lens of Google search.

### Searching for ways to help

Within two minutes of the deadly attack on Paris in November, the French capital was searching for information on the assault underway in their city. Less than 10 minutes later, the rest of the world started searching. As of today, we've seen more than 897 million searches about the city as the world came together to "Pray for Paris."

Global showings of support and offerings of help were a key topic in search this year. Following the Nepal earthquake, "how can I help Nepal?" was a top global search. From Somerville, Mass. to Ludwigsberg, Germany, people asked how to volunteer and what to donate.

### Searching for perspective

While questions around Nepal were similar around the world, the migrant crisis in Europe spiked a wider variety of queries. From Italy asking "How to adopt a Syrian orphan child?" to Germany wondering "Where are the refugees coming from?" the world turned to Google to understand the situation and what it meant for them.

In the U.S., the topic of guns brought varying questions. From Portland, Ore. to Austin, Texas, people across the country searched for "what is gun control," "why do we need gun control," "why won't gun control work" and more to understand the issue. With more than 160 million searches, interest in gun control spiked higher than interest for gun shops—typically a more popular search—at multiple points in 2015.

### Searching for acceptance

In June, we met Caitlyn Jenner, someone we'd both always known and were meeting for the first time. Across the globe, she was searched more than 344 million times, and her story helped give a new voice to the transgender community.

People cheered "#lovewins" when the U.S. Supreme Court made a monumental ruling that gay marriages should be recognized at both the State and Federal level. The reaction was instant, with search interest in both same-sex marriage and the Supreme Court reaching higher than at any time in Google's history.

### Searching for... the dress, the Force and the singer

Turning to the Search watercooler, the year began with the world divided over an important question: is it white and gold? or blue and black? Days of debate and 73 million searches later, "black and blue dress" topped searches of "white and gold dress," and the matter was settled forever (right?).

And though "Star Wars: The Force Awakens" is just hitting theaters this week, it's already taken the Internet by storm(trooper). The trailer alone garnered more than 155 million searches! But the all-time high for Google searches around "Star Wars" was in 2005 after "The Revenge of the Sith" came out in

theaters-can we beat it this week?

Finally, what better way to close out the year than by saying "Hello"? With the debut of "25," Adele broke records by the week, putting her album at the top of the charts and skyrocketing to the top of Google Search faster than any other musician this year.

### Hundreds of stories in depth

The 2015 Year in Search goes deeper than we've ever gone before. This year, we're covering hundreds of news stories, sharing interactive guides and charts, and diving into the numbers by sharing things like how many times people searched for Adele (439 million, if you want to know!).

See how all of the biggest stories of the year compared:

Go to Google.com/2015 to explore the rest of the 2015 Year in Search stories and top trending charts from around the world.

Posted by Amit Singhal, Senior Vice President, Search http://1.bp.blogspot.com/-szT0CpTrHss/VnEWd ApFBxI/AAAAAAAAAIU/L-tT2ireW74/s1600/YIS-Mars-Blog.jpg Amit Singhal Senior Vice President Search Sharing photos and videos between friends and family after your birthday bash or holiday gathering shouldn't be difficult. But between the great shots your brother has buried on his iPhone and that friend who keeps forgetting to email you her pics, you're often left reliving the event through just the photos and videos you took yourself.

Today we're introducing shared albums in Google Photos—a fast and simple way to pool your photos and videos that makes it easier to bring everyone's memories together.

With the launch of Google Photos in May, we made it simpler to share images and albums by sending links over SMS, email, or messaging apps. With today's launch, you can now make the albums you send collaborative. People receiving the shared album can join to add their own photos and videos, and also get notifications when new pics are added. You can even save photos and videos from a shared album to your Google Photos library, so that you can hold onto them even if you weren't the one holding the camera.

Best of all, there's no setup—select photos, make an album and then send the link off to whomever you'd like. And it works no matter what device your friends and family are using—tablet or laptop, Android or iPhone.

Shared albums is rolling out today on Android, iOS and the web. Time to create an album and revisit that holiday party from another angle!

Posted by James Gallagher, Engineering Lead, Google Photos IMAGE URL James Gallagher Engineering Lead Google Photos 2015 was kind of a big year for YouTube. Along with a year-long celebration of YouTube's 10th birthday, YouTube creators and their fans introduced the planet to the latest dance crazes, opened up discussions about diversity and inclusion, and lip-synced in cars and onstage in front of the whole, wide world.

Now it's time to look at the videos it seems like the whole world has seen: the top trending videos of 2015. From late-night hosts to Slow Mo Guys, Super Bowl ads to cops doing covers, these are the videos and creators we collectively watched, danced, and sang along to for more than 25 million hours this year.

- 1. Silento- Watch Me (Whip/Nae Nae) #WatchMeDanceOn by Tianne King
- 2. Clash of Clans: Revenge (Official Super Bowl TV Commercial) by Clash of Clans
- 3. Crazy Plastic Ball PRANK!! by RomanAtwood
- 4. Love Has No Labels | Diversity & Inclusion | Ad Council by Ad Council
- 5. Lip Sync Battle with Will Ferrell, Kevin Hart and Jimmy Fallon by The Tonight Show Starring Jimmy Fallon
- 6. Justin Bieber Carpool Karaoke by The Late Late Show with James Corden
- 7. 6ft Man in 6ft Giant Water Balloon 4K The Slow Mo Guys by The Slow Mo Guys
- 8. Golden boy Calum Scott hits the right note | Audition Week 1 | Britain's Got Talent 2015 by Britain's Got Talent
- 9. Dover Police DashCam Confessional (Shake it Off) by Dover Police
- 10. Mean Tweets President Obama Edition by Jimmy Kimmel Live

We got together 150+ YouTube creators from all over the world for the 2015 installment of YouTube's annual Rewind video, featuring everything from dance prodigies, to TV personalities, to an epic plastic ball fight.

Like what you see? If trending videos and creators are your thing (and you want to see them before next year's annual round-up), check out the new YouTube Trending tab. You'll get the videos that are taking off delivered directly to your Android, iOS, and desktop device—the best way to catch the videos, creators, and trends the world is talking about.

Posted by Kevin Allocca, Head of Culture & Trends IMAGE URL Kevin Allocca Head of Culture & Trends YouTube

### **Google Demo Day: shining a light on female entrepreneurs**

Women around the world are creating and building incredible technology companies. We see this every day through our Google for Entrepreneurs programs—like #40Forward, which works with organizations to increase the representation of female entrepreneurs in startup communities, and our baby-friendly startup school Campus for Moms. Supporting these startups is important because teams with diverse perspectives and experiences—particularly in leadership positions—make better products for users.

But the data still tells us that women-led startups often struggle to get access to top investors who can help them raise money. Despite women owning 29 percent of U.S. businesses, female-led companies receive only 3 percent of venture capital—a lifeline for many startups to fund new product development and hiring.

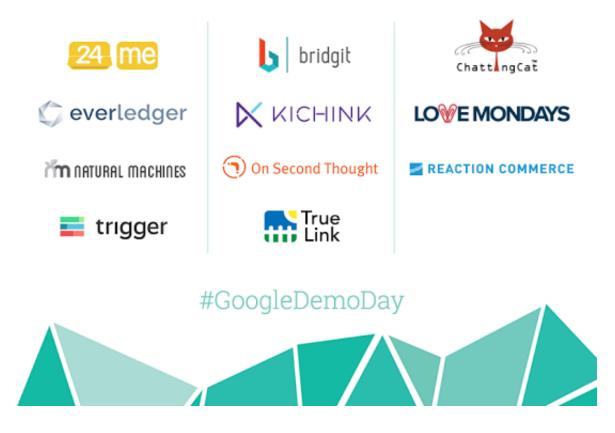
With this in mind, today we're hosting our first Google Demo Day specifically for startups with female founders. More than 450 companies from 40+ countries applied, and we chose 11 female-led startups to join us in San Francisco for the event. These startups come from all over the world and span a variety of industries—from Kichink, a B2B e-commerce company in Mexico, to ChattingCat, a real-time translation service in South Korea.



At today's event, each startup will have four minutes to pitch their businesses, followed by Q&A with a panel of judges. At the end of the day, the judges will crown a Judges' Favorite, based on the strength of their business model, their team, and their product. Demo Days aren't just a time to pitch investors; founders also receive mentoring and feedback from Googlers and Silicon Valley veterans through a series of talks and workshops.

# Ready, set, pitch.

Meet the 2015 Google For Entrepreneurs Women's Demo Day startups:



Companies from our past two Demo Days have raised \$3.5 million from investors who are in attendance, and millions more afterwards. For example, Durham, North Carolina-based beverage entrepreneur Tatiana Birgisson, who won our Demo Day in April, has raised more than \$1 million for her energy tea startup MATI Energy.

But it's not just the people in the room who can take part in the big day. You can tune in to the live stream on YouTube at 10am PT today to see Demo Day in action. You'll also have the chance to vote for the winner of the "Game Changer" Award, an audience favorite trophy. We hope this Demo Day will not only shine a light on the participating startups, but on the exciting companies being built and led by female entrepreneurs everywhere.

Posted by Mary Grove, Director of Google for Entrepreneurs http://2.bp.blogspot.com/-eEx8bgGGe1I/V mhcryv1YwI/AAAAAAAAARkU/92ZGHjnC5Uc/s1600/IMG\_6152.JPG Mary Grove Director Google for Entrepreneurs

This holiday season, there's no shortage of electronics to choose from. When it comes to picking out what device to use, sometimes you want a laptop to hammer out a lengthy document. Other times you want a lightweight tablet to sit back and watch your favorite video. Starting today, you don't have to choose, because the Pixel C is available on the Google Store. As we previewed two months ago, Pixel C brings together the benefits of a full-size keyboard with the portability of a tablet so it can go wherever you go.



The Pixel C's high-resolution, 10.2" display is crisp, colorful, and bright—in fact it's one of the brightest tablets out there—perfect for sharing photos and videos with family over the holidays. Graphics horsepower and stereo speakers mean the Pixel C can keep up with you whether you're watching a new episode of "Silicon Valley" or playing a new game.

But what really makes the Pixel C unique is the full-size keyboard, which is designed to fit perfectly with the tablet. It attaches seamlessly with magnets, and automatically connects via bluetooth. When the tablet and keyboard are closed together, the keyboard charges wirelessly and automatically—so you never have to worry about it running out of juice. And when you don't need to type, the keyboard tucks securely behind the tablet with magnets—out of the way but close by for when you need it.

This is the first tablet designed with Android 6.0, Marshmallow in mind. You get added security benefits, smarter and longer battery life (10+ hours) and Now on Tap at your fingertips. To ensure the Pixel C gets even better over time, it will receive regular security and feature updates directly from Google. But what makes a tablet great is the amount of things you can do with it—and you've got plenty to choose from with s'more than 1 million apps on Google Play.

The Pixel C is available on the Google Store now starting at \$499, and if you order today, you can get it in time for the holidays.

Posted by Andrew Bowers, Director, Product Management & Pixel Perfectionist http://1.bp.blogspot.co m/-MSxFo36Ms9s/VmcZS04uGoI/AAAAAAAAARjk/XXLJgtvRz2M/s1600/NexusRYUKey\_O\_SILVER\_ TQF.png Andrew Bowers Director Product Management

### Make your home Internet look like your home with OnHub

Chances are, somewhere in your home, there's a tangled mess of wires and blinking lights that make your Wi-Fi work. Your router likely isn't the most sightly thing, and you probably hide it behind a curtain or under a bookcase—out of sight.

Turns out, that's a bit of a problem, since routers work better when they're out in the open. So a few months ago, we released the first OnHub router from TP-LINK. It replaces the unruly cords, blinking lights, and bulky antennas of a typical router with subtle lighting and internal wiring, so you're more likely to put OnHub out where it works best.

Today we're introducing more ways to make your OnHub look great in your home with three new, interchangeable shells for the OnHub from TP-LINK, as well as OnHub Makers, a gallery of shells designed by artists, designers, and makers.

With OnHub Makers, we wanted to see what some of the world's most creative minds would do to personalize their routers. We reached out to artists, makers and designers who poured resin, blew glass, and cut paper to make their own unique shells. You can see their creations and learn more in the OnHub Makers gallery.

Feeling inspired? Then it's time to get crafty. We've put together all of the information you need to customize an OnHub shell. Whether you're using a laser cutter or simple finger paints, download the Maker Packet for 3D files, 2D patterns, and useful guidelines. Once you're done, be sure to share your designs online using the hashtag #OnHubMakers, and we may feature your design in our gallery.

If DIY isn't really your thing you can still add some style to your Wi-Fi with one of the three new shells from the OnHub team, available later today in the U.S. for \$29-39 on the Google Store.



Posted by Ben Brown, Product Manager, OnHub

http://4.bp.blogspot.com/-HTzSqT1Y7a8/VmcSiW9\_Z4I/AAAAAAAARjU/NREGWCoteUo/s1600/Jetst reamShell\_O\_TAF1\_16x9%2B%25281%2529.png Ben Brown Product Manager OnHub

### Hello. It's the best of 2015 on Google Play.

Movie fans went to space in search of a new home in *Interstellar*. The citizens of Westeros battled not only white walkers, but also the zombies of *The Walking Dead* and the landed gentry of *Downton Abbey* to claim the Iron Throne of the TV kingdom. Adele no longer had to worry if "after all these years you'd like to meet" up with her music again, as *25* became the best-selling album of the year in just one week. And readers fell in love with Christian Grey... again!

As 2015 comes to a close, we crunched the numbers to find the most popular entertainment this year on Google Play. For complete lists, visit Google Play.



### Movies of the Year

- 1. Interstellar
- 2. *Lucy*
- 3. American Sniper
- 4. The Interview
- 5. Kingsman: The Secret Service

### **TV Shows of the Year**

- 1. Game of Thrones
- 2. The Walking Dead
- 3. Downton Abbey
- 4. Fear the Walking Dead
- 5. Vikings

### Albums of the Year

- 1. 25 from Adele
- 2. If You're Reading This It's Too Late from Drake
- 3. To Pimp A Butterfly from Kendrick Lamar
- 4. Fifty Shades Of Grey (Original Motion Picture Soundtrack) from Various Artists
- 5. Beauty Behind The Madness from The Weeknd

### **Books of the Year**

1. Fifty Shades of Grey: Book One of the Fifty Shades Trilogy by E L James

2. Grey: Fifty Shades of Grey as Told by Christian by E L James

3. Fifty Shades Darker: Book Two of the Fifty Shades Trilogy by E L James

4. *Fifty Shades Freed: Book Three of the Fifty Shades Trilogy* by E L James

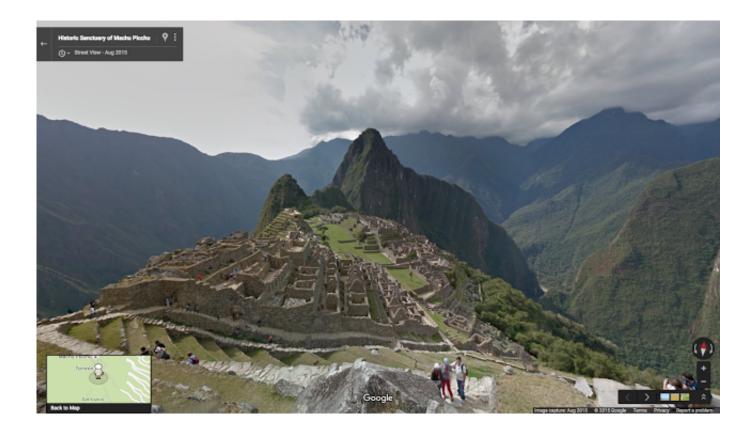
5. *American Sniper: The Autobiography of the Most Lethal Sniper in U.S. Military History* by Chris Kyle, Scott McEwen and Jim DeFelice

Posted by Kara Bailey, Director of Merchandising, Google Play http://1.bp.blogspot.com/-gQVk5bSzX\_ Q/VmXriULHLGI/AAAAAAAARiw/uhmd\_VntXFU/s1600/Game\_of\_Thrones\_highlight-tvus-20150831-3194x1797-080703%2B%25281%2529.jpg Kara Bailey Director of Merchandising Google Play

### Walk the ruins of Peru's most historic site: Machu Picchu

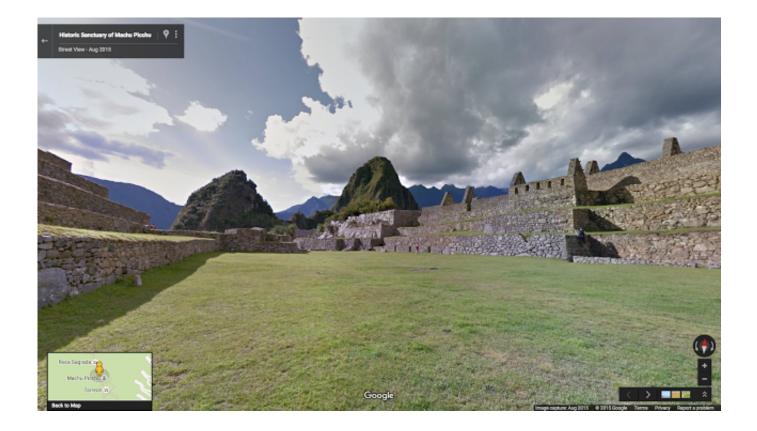
Take a train ride through the Andes, above the sacred valley and atop the mist of the mountains, to the most historic site of the Inca Empire. Machu Picchu, a UNESCO World Heritage Site and one of the New 7 Wonders of the World, is one of the most famous, mythical and spiritual sites in the world. Now for the first time, in partnership with the Peruvian Ministry of Culture, people across the globe can go on a journey to Machu Picchu directly in Google Maps, uncovering its temples, terraces and plazas that have remained intact since the 15th century. People can also explore rare Inca artifacts and expert insights on the Google Cultural Institute.

Gazing at the Historic Sanctuary of Machu Picchu more than 2,400 meters above sea level, the site below is a lasting tribute to the power of the Inca Empire. It's still unclear how the structure composed of behemoth stones was so precisely built without the use of mortar or modern day machinery, but its walls, terraces and stairways weave effortlessly into the mountainside and natural landscape.



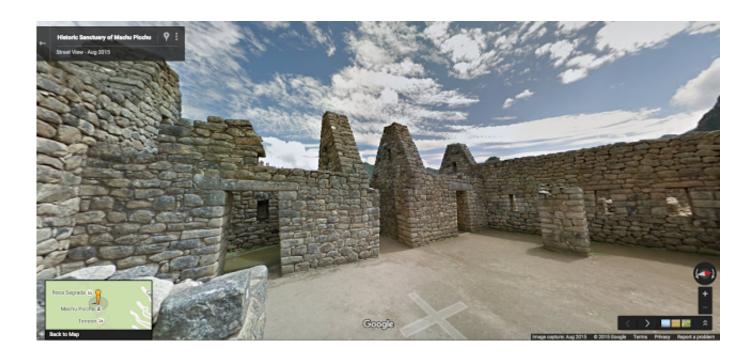
### Historic Sanctuary of Machu Picchu, Peru

Standing in the Templo Principal, you can imagine how many people have stood at this central gathering place before you. Located at the highest position of the city, this site holds great spiritual meaning to the people of the Citadel. And touring the vast Plaza Principal allows you to virtually walk one of the most sacred ceremonial grounds on the site, which once hosted social and religious celebrations for the Inca.



### Plaza Principal of Machu Picchu

Within the long and narrow compounds, called kanchas, you can also explore the Observatorio Astronómico (Intiwatana), Templo del Sol, and Templo de las Tres Ventanas—sites dedicated to Inti, the Inca Sun god—or marvel at the architectural complexity of structures like the Grupo de las Tres Puertas, whose doors lead to the main square.



### Grupo de las Tres Puertas, Machu Picchu, Peru

After virtually touring these sacred and ceremonial spaces, discover more Wonders of Machu Picchu on the Google Cultural Institute. You can explore more than 130 Inca artifacts online thanks to the Museo Macchupicchu at Casa Concha. In three new online exhibits, the museum's curators share their expert insights on the Inca's daily life and rituals—which are still a subject of great mystery and fascination over 500 years later. Highlights include a perfectly preserved pair of plates decorated with butterflies, and an ingenious device of strings and cords used for record keeping and accounting. See these rare objects in the context of the museum by taking a virtual tour.



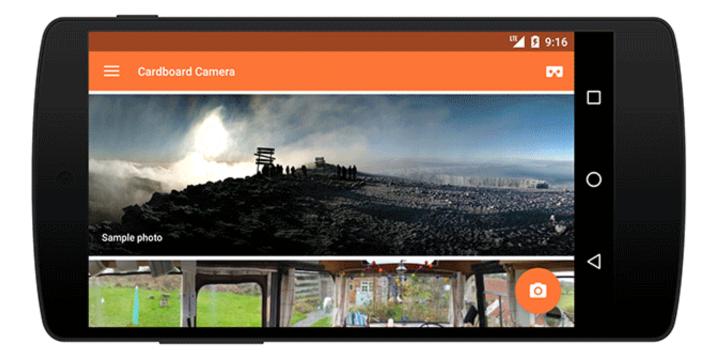
### Inca accounting device

Whether you visit Machu Picchu via a train or hike up the Inca Trail, we'd be honored to be your virtual guide through this sacred space. And while in the area, enjoy exploring still more archaeological treasures from this ancient civilization at the Museo Machupicchu at Casa Concha, which holds the largest collection of Inca artifacts in the world.

Machu Picchu, a true wonder of the world, is now just a click away.

Posted by Daniel Filip, Google Maps Tech Lead http://3.bp.blogspot.com/-r3hjidv6F60/VmHBCdpFq6I/ AAAAAAAARil/5Uxwk-SXiRI/s1600/historic%2Bsanctuary.png Daniel Filip Tech Lead Google Maps With Google Cardboard, you can take <u>amazing trips</u> to faraway places and feel like you're actually there. But what if you could also use Cardboard to go back in time—to step inside personal moments like your favorite vacation or a holiday dinner with family? Now you can with the new <u>Cardboard</u> Camera app for Android.

Cardboard Camera turns the smartphone in your pocket into a virtual reality (VR) camera. It's simple to take a photo: just hold out your phone and move it around you in a circle. Later, when you place your phone inside a Google Cardboard viewer, you'll get to experience something new: a VR photo.



VR photos are three-dimensional panoramas, with slightly different views for each eye, so near things look near and far things look far. You can look around to explore the image in all directions, and even record sound with your photo to hear the moment exactly as it happened.



Taken with Cardboard Camera at Jackson Lake, Wyoming. This simulates the 3D effect when seen in a Cardboard viewer.

With Cardboard Camera, anyone can create their own VR experience. So revisit the mountaintop that took hours to hike, or the zoo where you saw (and heard) the monkeys, or your birthday party with the cake out and candles still lit. Capture the moments that matter to you and relive them anytime, from anywhere.

Cardboard Camera is available today on Google Play in 17 languages.

Posted by Carlos Hernandez, Software Engineer, Cardboard Camera http://3.bp.blogspot.com/-cXaR6 CyEPw8/VmBpIVPkEkI/AAAAAAAAAAhg/hAv4GJWbWMA/s1600/Simulates\_3D\_Effect\_in\_Viewer.gif Carlos Hernandez Software Engineer Cardboard Camera Today we're announcing the largest, and most diverse, purchase of renewable energy ever made by a non-utility company. Google has already committed to purchase more renewable energy than any other company. Now, through a series of new wind and solar projects around the world, we're one step closer to our commitment to triple our purchases of renewable energy by 2025 and our goal of powering 100% of our operations with clean energy.

### 842 MW of renewable energy around the world

Today's agreements will add an additional 842 megawatts of renewable energy capacity to power our data centers. Across three countries, we're nearly doubling the amount of renewable energy we've purchased to date. We're now up to 2 gigawatts—the equivalent to taking nearly 1 million cars off the road.

These additional 842 megawatts represent a range of locations and technologies, from a wind farm in Sweden to a solar plant in Chile.

## Over 2 gigawatts of renewable energy projects



These long-term contracts range from 10-20 years and provide projects with the financial certainty and scale necessary to build these wind and solar facilities—thus bringing new renewable energy onto the grid in these regions. For our part, these contracts not only help minimize the environmental impact of our services—they also make good business sense by ensuring good prices.

### Our commitment to a sustainable energy future

Since we opened our very first owned data center in 2006, we've been working to promote renewable and sustainable energy use in several ways:

- First, we're building the world's most efficient computer infrastructure by designing our data centers to use as little energy as possible.
- Second, we're driving the renewables industry forward by fully committing to renewable sources. In 2010, we entered our first large-scale renewable power purchase agreement with a wind farm in lowa, and we subsequently completed a number of similar large-scale energy purchases

over the past five years. Today's announcement is another milestone in this area.

- Third, we've worked with our utility partners to help promote transformation in the utility sector. In 2013 we created a new program that enables customers like Google to buy large amounts of renewable energy directly from their utilities. Today's announcement includes the first solar project enrolled under that program. And this past summer we announced that our newest data center will be on located on the site of a retiring coal plant and will be 100% renewable powered from day one.
- Fourth, beyond our efforts to power our own operations with renewables, we've made separate agreements to fund \$2.5 billion into 22 large-scale renewable energy projects over the last five years, from Germany to Kansas to Kenya. These investments have been in some of the largest and most transformative renewable energy projects in the world with a goal to help drive renewable energy development not only as a customer but as an investor, and bring down costs for everyone.

And we're also working on new technologies and ideas—ranging from Project Sunroof to Makani Power to air quality monitoring—that we hope can make a cleaner energy future an option for many more people.

With world leaders coming together at the COP21 UN conference on climate change in Paris this week, there's no better time to focus on renewable energy. We hope that our efforts play a small part in boosting all of us in the race to solve climate change.

### On IDPD, working toward a more accessible and inclusive world

We believe in a world built for everyone, which is why we launched the global Google Impact Challenge: Disabilities earlier this year. The Impact Challenge is a Google.org initiative to invest \$20 million in nonprofits who are using technology to make the world more accessible for the 1 billion people living with disabilities.

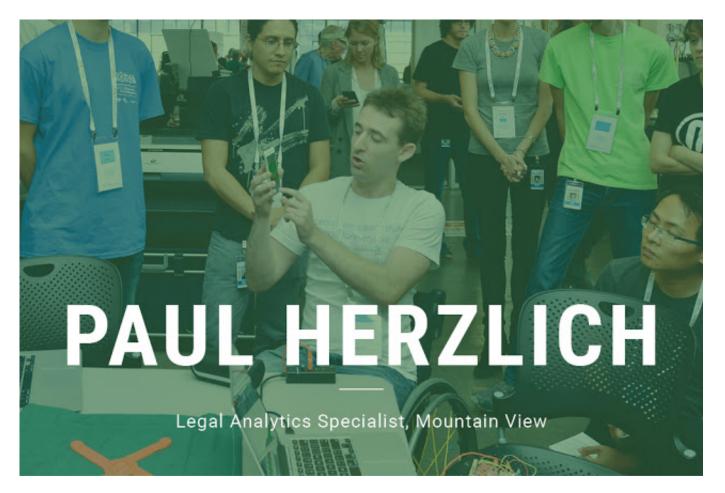
Today, as part of the program, we're proud to celebrate the U.N. International Day of Persons with Disabilities with three new grants, totalling \$2.95 million. Through our grants, the Royal London Society for Blind People will develop the Wayfindr project, helping visually impaired people navigate the London underground; Israeli NGO Issie Shapiro will distribute Sesame, an app that allows people with mobility impairments to control a smartphone using only head movements; and, finally, German grantee WheeImap will expand its accessibility mapping efforts worldwide. This week, many Googlers around the world will also join WheeImap's Map My Day campaign to help out.

We've also collected 11 tips that help people with disabilities get more out of their favorite Google products. (Why 11? It's a play on "a11y", tech-speak for "accessibility.")

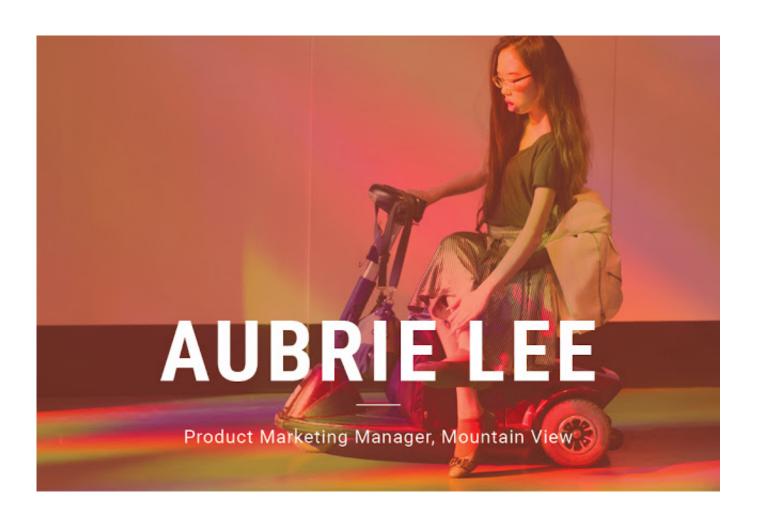
Much of the accessibility work we do is driven by passionate Googlers from around the world. To give you a look at what motivates us to make Google, and the world, more inclusive, we asked four Googlers from our Disability Alliance to share more about what they're working on:

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**Kiran Kaja, Technical Program Manager, London:** Being blind from birth, I've always been excited by devices that talk to you or allow you to talk back to them. Today, I work on Google's Text to Speech team developing technologies that talk to people with disabilities. I'm also helping improve eyes-free voice actions on Android so that people with low vision can accomplish standard tasks just by talking to their phone. This not only helps people with disabilities, but anyone whose hands are busy with another task—like cooking, driving or caring for an infant. The advances we're making in speech recognition and text to speech output promise a bright future for voice user interfaces.



**Paul Herzlich, Legal Analytics Specialist, Mountain View:** As a wheelchair user from a spinal cord injury, I'm passionate about the potential impact of technology to solve disability-related issues. Outside of my job, I'm working alongside a team of mechanical and electrical engineers, UX designers, and medical professionals to develop a new technology called SmartSeat, which I hope to bring to life in tandem with Google.org through its Google Impact Challenge: Disabilities. SmartSeat is a device that notifies wheelchair users when they have been sitting in the same position for too long by using force sensors connected to a mobile app, thereby helping these users prevent pressure sores. You can watch a video of the early prototype on YouTube.



Aubrie Lee, Associate Product Marketing Manager, Mountain View: Like many other disabled people, I've spent most of my life as the minority in the room. In high school, I attended a state forum on disability and felt what it was like to be in the majority. Now, I work to create that feeling for other disabled people. I started the Googler Disability Community, a group that works on changing Google's physical environment and workplace systems to help make our company truly inclusive. Outside of my job, I enjoy exploring the beauty in disability through photography and poetry. My own disabilities and the way they influence my interactions with others provide endless inspiration for my art.



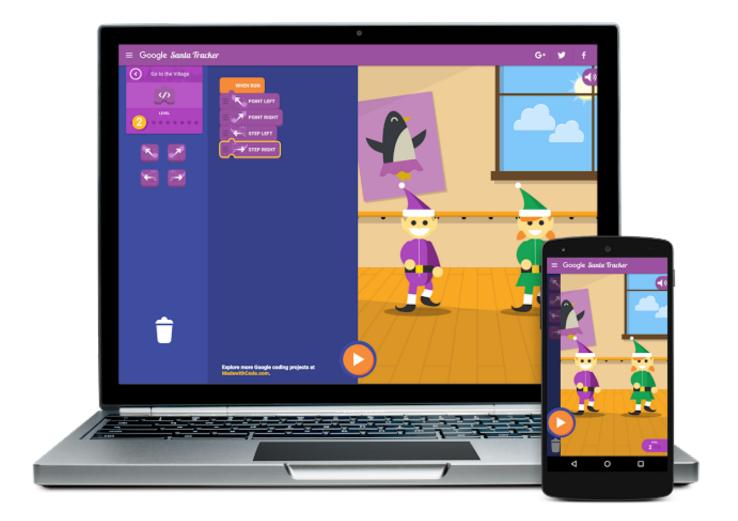
**Pablo Pacca, Language Market Manager, São Paulo:** I'm in charge of making sure Google's products are translated well into Brazilian Portuguese for the 180+ million Brazilians who don't speak English. I'm also an activist and advocate for accessibility and inclusion, both as a blogger on disability issues and the lead for the Google Brazil People with Disabilities (PwD) group. At PwD Brazil, we educate Googlers about disability issues, and work to foster a more accessible office space and inclusive work environment across the company.

Posted by Jacquelline Fuller, Director of Google.org http://1.bp.blogspot.com/-Z0HyNg4JKLg/VmBrQ9NUuRI/AAAAAAAAAAAAh0/jlyoeeYBgFA/s1600/DSC\_8 076.jpg Jacquelline Fuller Director Google.org Santa doesn't spread cheer across the globe all by himself. As soon as the first frost is on the mistletoe, hundreds of helpful elves work day and night to make sure jolly old St. Nick is ready for flight. Santa's Village is a hub of activity as the elves code algorithms to tune Santa's sleigh, translate "Happy Holidays" into Elvish and Danish, and practice their cartography with Dancer, Prancer, Donner and Vixen... all to get Santa ready for his trip around the world on December 24.

And you can join in. Visit the brand-new Santa's Village every day to prep alongside the elves, test weather conditions with Rudolph, skydive with Santa, learn about holiday traditions like *kallikántzari*—little creatures from Greece that eat Christmas cookies—and much more. A new experience will appear each morning leading up to December 24. Here's a peek at what you'll unwrap in Santa's Village:



Join the elves on all screens as they get ready for Santa's big night—with Chromecast, Wear, App for Android, and more.



Brush up on your computer skills with new coding games throughout the month.



Get into the spirit of giving—learn about charitable organizations and discover how SolarAid is working to make the season brighter with renewable energy.



Take a study break to jam out with friends to elf-made holiday tunes.



For those on the ho-ho-go, get the Santa Tracker App for Android to check out new games on the phone or through Cardboard.

Now before Santa flies like the dawn of a thistle, pay his village a visit—and help him and his elves get ready for the day Santa hits the clouds.

Posted by Sandy Russell, Santa Launch Strategist http://2.bp.blogspot.com/-rhV\_heELzZU/VI6InJ0Bz GI/AAAAAAAAAfU/1zoOEqoO0DY/s1600/SantaTracker2015\_village-on-devices1.png Sandy Russell Santa Launch Strategist

# Join Google.org to help make education more inclusive for students with special needs

For the past month, Google.org has funded 750+ projects through the education crowdfunding site DonorsChoose.org to help teachers of students with special needs, as part of our Google Impact Challenge: Disabilities. Today we're hearing from one teacher whose project was funded—Mr. Javier Payano, a music teacher at Lane Tech in Chicago. -Ed.

In two years of teaching students with special needs, I've learned how music can give students the opportunity to discover themselves. In our music inclusion choir, band and orchestra classes, students with disabilities make music with general education students, each at their own level of ability. I've seen music help even the most shy and reticent students socialize, smile and come out of their shells.

Unfortunately, we don't always have the right kinds of musical instruments to meet the diverse needs of every kid in my class. For classrooms like mine in Chicago, specialized equipment can truly open up the learning environment. From floor keyboards to rhythm instrument sets, I'm able to ensure that every student, no matter their mobility style, has a meaningful experience in my class.



Me and my students performing at a school assembly on November 10, 2015

That's why I was so thrilled to learn that Google.org was funding my request on DonorsChoose.org to bring my music inclusion project to more students. For the past month, Google.org has hosted schoolwide celebrations to honor teachers of students with special needs, and funded hundreds of DonorsChoose.org special needs projects like mine. Starting today for #GivingTuesday, Google is making it easier for everyone to support teachers by matching up to a million dollars in donations to increase inclusion, equity and opportunity for students with diverse learning styles. In addition, last week

Android Pay committed to donating up to another \$1 million to special needs projects on DonorsChoose.org.

There are currently 6.4 million students with special needs in the U.S.—13 percent of the total student population. Yet, a \$17 billion federal deficit in special education funding leaves far too many gaps across classrooms. In fact, on average, all teachers spend \$485 of their own money each year on their classrooms.

Teachers like me are working to make sure all students can have an equal and inclusive education. And you can help provide some of the materials they need most—take a look! Together, we can help make education more inclusive #ForEveryKid.

Posted by Javier Payano

http://1.bp.blogspot.com/-0Dc6bEwIfn4/VI0CSME9qMI/AAAAAAAAReE/pTFCdttqVR0/s1600/DSC\_4 951.JPG Javier Payano Music Teacher It takes years of practice to perfect the pirouettes. Months of rehearsal to get the crescendos just right. Multiple stories of lights, rigging and machinery to set the scene. At the world's leading performing arts venues —like Carnegie Hall, the Berliner Philharmonie, the Bolshoi Theatre—artists, costume designers, musicians, stage crews and many more all come together to create the perfect moment on stage.

And now you can join them. In a new virtual exhibition from the Google Cultural Institute and more than 60 performing arts organizations, you can experience dance, drama, music and opera alongside some of the world's leading performers—onstage, backstage and with a 360 degree-view of the action.

The new Performing Arts exhibition gives you a view that's even closer than a front-row seat in the house. With 360-degree performance recordings, you you can choose a dancer's-eye view of the crowd, or look down from the stage into the orchestra pit. At the Paris Opera, you can stand in the middle of the largest stage in Europe, surrounded by dancers performing choreographer Benjamin Millepied's moves. Sit between the woodwinds and strings at Carnegie Hall with a full view of Maestro Nézet-Séguin. Don't worry if you're underdressed as you tour the Berliner Philharmoniker's rehearsal performance of Beethoven's *Symphony No. 9* with conductor Sir Simon Rattle—you'll see the orchestra is not in black tie either.

Beyond the performance itself, new indoor Street View imagery gives you an all-access backstage pass to the venues. Wander through the wig workshop at Brussels' opera house, look beneath the stage at the historic underground arches of the Fundação Teatro Municipal in São Paulo, or zoom in on ultrahigh resolution Gigapixel costume images at France's National Centre for Stage Costume, before browsing more than a hundred interactive stories about the shows, the stars and the world behind the scenes. If you're lucky enough to be planning an in-person visit to one of these venues, you can tour them in Street View first to see where you'll be sitting, or how the view is from the balcony.

The Google Cultural Institute was founded in 2011 to bring the world's treasures to anyone with an Internet connection. Starting in partnership with a handful of renowned museums, we've since joined forces with 900+ institutions to include historic archives, street art, and 200 wonders of the world. Now you can also visit dozens of the world's stages together in one place—across mobile, tablet and desktop at g.co/performingarts and on the Google Cultural Institute website.

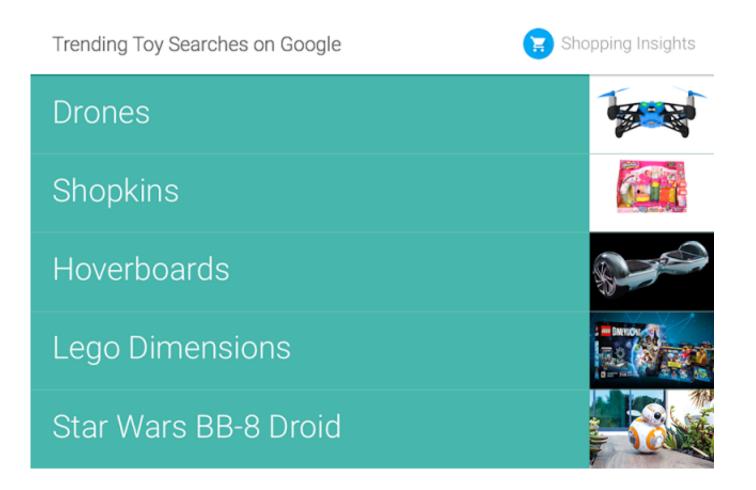
Curtain-up, and let Performing Arts take the stage!

Posted by Amit Sood, Director of the Google Cultural Institute

http://3.bp.blogspot.com/-eM1y-zb3TNo/VI4nVXhnmal/AAAAAAAARes/J2\_xQ7QtbnA/s1600/Google-PerfArts-TitleTreatments-paris-image.jpg Amit Sood Director Google Cultural Institute

# From hoverboards to adult onesies: the gifts we're searching for this holiday

If your holiday shopping plan this season involves grabbing a spare minute on your phone to hunt for presents while you're standing in line or on the train to work, you're not alone. More than half of holiday shoppers say they plan to use their smartphones in free moments throughout the day to get their holiday list done. As we wake up to what has become *the* day for online deal hunting—Cyber Monday—we took a look at the top gifts trending on Google Search to help you shop smarter in those spare moments. Here's a look at online shopping search trends across the U.S., to give you ideas of what your loved ones might like to find under the tree.

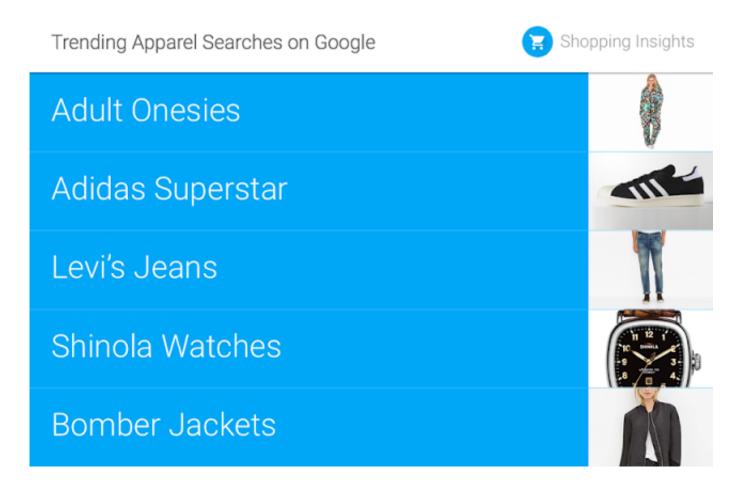


Source: Google Shopping Data, U.S., Oct 2015 vs. Oct 2014

**Drones are now toys:** Drones are no longer expensive playthings for the tech-savvy. Search for "toy drone" and you'll find countless inexpensive, easy-to-use devices available from department stores and toy stores. And they're popular—nationwide, shopping searches for drones are up 80% over the past year, and they're highest in California.

**Hoverboards are real, and they're trending:** While we're on the topic of electronic toys, hoverboards are so popular this year they've even overtaken searches for drones. They may not be exactly like the boards from *Back to the Future* or the Lexus commercial, but these two-wheeled boards have become a

hot toy this season. Searches for "hoverboards" started trending in the summer and are up more than 500% since July.

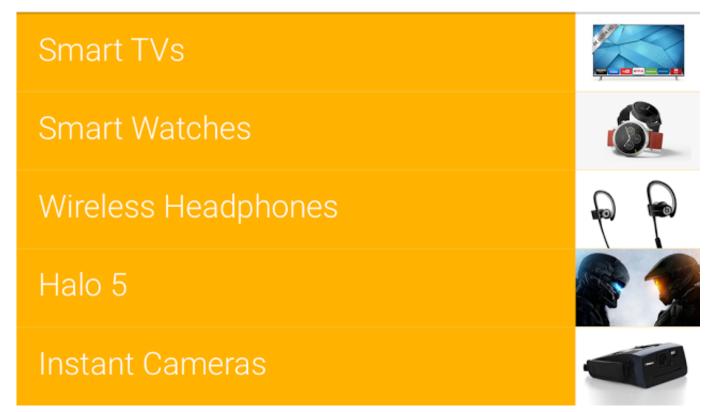


Source: Google Shopping Data, U.S., Oct 2015 vs. Oct 2014

**Holiday onesies are the new "ugly Christmas sweaters":** Last year "ugly Christmas sweaters" were all the rage. This year we're seeing holiday onesies are the new kitsch partywear of choice, as searches for "adult onesies" are trending even faster than searches for "ugly Christmas sweater." (Hey—we don't try to explain these trends. We just report them. -Ed.)

**Your 90s wardrobe is BACK:** Bomber jackets. Levi jeans. Adidas Superstars. Looking at this year's top-trending apparel list you'll be forgiven for thinking we've gone back to the 90s. Not only have we seen searches for these 90s fashion trends more than double over the past year, each city has their own 90s fashion item of choice—shoppers in Chicago are more interested in Levis while shoppers in New York are on the hunt for Adidas Superstar shoes.





Source: Google Shopping Data, U.S., Oct 2015 vs. Oct 2014

"Smart" devices top electronics searches: With more models on the market than ever, both smart watches and smart TVs topped our list of trending electronics this year—with "smart watch" searches seeing a particularly phenomenal growth, up nearly 300% compared to last year. But as smart devices get more popular, retro electronics are also making a comeback: searches for instant cameras like "Polaroid Camera" and "Fujifilm Instax" have been rising steadily in popularity each holiday season.

So there you have it. Ready to start shopping? To help you search for these gifts quickly and easily while on-the-go, we recently redesigned Google Shopping on mobile. And for more insights behind this season's trends, check out the Shopping Insights tool. Happy deal-hunting!

Posted by Brad Johnsmeyer, Google Insights

Brad Johnsmeyer Manager Google Insights In just a few hours, people across the U.S. will be settling in for a day of food, family and football as they celebrate Thanksgiving. As the day of gluttony and gratitude comes closer, people have been turning to Google to plan the big meal, get cooking tips and more. Here's a look at some of the top Turkey Day searches—for more, see Google Trends.

#### The reason for the season

In the days leading up to Thanksgiving, people turn to Google to learn more about the origins of the holiday and its traditions, both new and old. Top questions include "Why did the pilgrims celebrate the first Thanksgiving?" and "What president made Thanksgiving a national holiday?"

#### The other reason for the season

Gratitude may be in the name, but food is the centerpiece of Thanksgiving. For weeks now people have been searching for recipes to wow their relatives this Thursday, from classics like cranberry relish and mashed potatoes to turkey alternatives like lasagna and beef stew. Here's a look at the top recipes that trend every November:

Even amongst regional variations, family eccentricities or that ambitious new recipe you clipped from a food magazine, there's one dish that takes the casserole on Thanksgiving Day. Stuffing is the top searched Thanksgiving recipe in 49 out of 50 states, with only North Carolina standing up proud for sweet potatoes. Our take: Why not have both?

## How do I...?

Even for people whose usual meal prep consists of shuffling through take-out menus, Thanksgiving is a time to roll up your sleeves and get to work in the kitchen. That—and the fact that a 20-lb poultry dish is a little harder to put on the table than, say, the ol' blue box of mac and cheese—means it's also a time when many turn to Google to brush up on some cooking tips. In the weeks leading up to Thanksgiving, you're asking all kinds of questions, from simple queries like "how to cook spaghetti squash" and "how to boil eggs" to advanced topics like "what can I make ahead for thanksgiving?" and the very crucial, very daunting "How do you make turkey gravy?"

## Let's talk turkey

The top Thanksgiving recipe question, however, is focused on the main dish: "How to cook a turkey?" Related questions include "how much turkey do you cook per person?" (Answer: there's math involved

but the most important part is making enough for sandwiches for multiple days after), followed quickly by "How long to cook a turkey?" (answer: more math).

And though roasting is still the top trending technique method for cooking the big bird, enterprising (or efficiency-oriented) chefs across the U.S. are also searching for tips on how to smoke and deep-fry their turkeys. Proof that there's more than one way to cook a turkey.

Whether you'll be slicing into pumpkin or pecan pie, eating your turkey smoked, turduckened or made of tofu, serving up fresh cranberry sauce or popping open a can—we hope you have a happy Thanksgiving!

Posted by Emily Wood, Managing Editor, who is now very hungry

Emily Wood

Managing Editor

Google Blogs

QUOTE GOES HERE

Starting today you can explore more than 30 historical sites throughout Jordan in Google Street View. To tell you more, read today's guest blog post, by Her Majesty Queen Rania Al Abdullah of Jordan. -Ed.

What a great day for Jordan and Jordanians! Thanks to Google Street View, we can now share the rich, proud and varied history of our country with anyone who has an Internet connection. With more than 30 historical sites available to explore virtually, people all over the world now have a window into our beautiful Kingdom in the heart of the Middle East.

Throughout the ages, ancient civilizations have left their footprints in Jordan. Reminders of the Silk Road which linked the regions of the world in commerce. Ancient cities, such as the Romans' Jerash and the Nabateans' Petra. Significant religious sites, like Mount Nebo and the River Jordan. And, to this day, we continue to discover such footprints.

With Google Street View, would-be visitors, or those just curious to learn more about our ancient lands, can explore Jordan's unique historical heritage online. That's one of the reasons I love this technology. Not only does it connect millions of people from all corners of the world, it provides a lens on the past. And when we understand more about each other's stories and cultures and histories, we realize that we are more alike than we are different. That's why we must preserve these treasures for future generations. They're a doorway to our shared narrative.

To this day, after too many trips to count, Jordan's ancient archeological site, the Rose-Red city of Petra, still fills me with awe. Concealed in majestic mountain gorges, visitors can wander through the entire city of Petra, imagining what life was like in the thriving trading center and capital of the Nabataean kingdom. Carved by hand into vibrant red, white and pink sandstone cliffs, it has, miraculously, survived earthquakes to withstand the test of time. Film buffs might recognize it from Indiana Jones and the Last Crusade when Harrison Ford and Sean Connery joined forces in their quest to find the Holy Grail. Now, you can step back in time and take a narrated tour of this hidden gem, exploring the tombs, sites and amphitheater that span an area the size of lower Manhattan.

## The Treasury in Petra is estimated to be more than 2,000 years old

Jerash is the second most visited site outside Petra. It's considered one of the best preserved examples of Roman architecture outside Italy. With one click, you can stroll through its ruins, walk its streets, sing in its theaters and contemplate life in its baths and temples. Before you leave, remember to send a message through the city's ancient whispering columns!

Colonnaded Street - Jerash, Jordan

Mount Nebo, located 10 km west of the Roman Byzantine town of Madaba, is one of the most revered holy sites in Jordan. While you're close to Madaba, step into its historic church to view the Madaba Mosaic Map, the oldest known geographic floor mosaic in art history.

The Madaba Mosaic Map, created in 6th century AD, originally contained more than 2 million tesserae!

The Madaba Mosaic Map in church of Saint George - Madaba, Jordan What could be more relaxing than a float in the world's saltiest waters? A visit to the Dead Sea, the lowest point on earth, is known to be a very therapeutic experience, thanks to its oxygen-rich water and mineral-mud.

Dead Sea Panorama - Dead Sea, Jordan

While you're exploring, don't be surprised if you find a medieval castle right in the middle of the desert. We've got many—from crusader castles like Al Karak, to Ajlun Castle built by Saladin, to Umayyad desert castles Qasr Amra and Qasr Al Kharana.

Qasr Kharana - Jordan

Jordan remains a haven of peace and moderation in the Middle East. So, please, come and visit us. Meet and talk with our warm and hospitable people. Taste our cuisine. Learn some Arabic. Relax in the therapeutic waters of the Dead Sea and the Ma'in Springs. Marvel at the rich colors of Wadi Rum, the spectacular desert backdrop to "The Martian." Walk in the footsteps of our forebears. There's so much to see and experience.

There's something for everyone in Jordan. And I couldn't be happier that now, thanks to Google Maps, we can share our rich cultural heritage with the world. Visit g.co/Jordanhighlights to start your tour. As we say to all our visitors: ahlan wa sahlan. Hello and welcome.

Posted by Her Majesty Queen Rania Al Abdullah of Jordan

Her Majesty Queen Rania Al Abdullah of Jordan

QUOTE GOES HERE

The first memory I have of watching a movie is with my dad. I was around four years old, and one afternoon he fired up our bulky, '80s-style front-projection TV and the Betamax, and popped in *Star Wars*. Of course, it was \*amazing\*, and I've watched the original trilogy a dozen times since.

It probably isn't a surprise that there are tons of *Star Wars* fans like me here at Google. You can regularly spot Darth Vaders, dogs dressed like Yoda, and even the occasional stormtrooper, roaming the halls of our data centers (probably still looking for those droids). So when we first heard about *Episode VII*, we started thinking about what a Google tribute to these epic stories might look like: "Wouldn't it be cool if there was some sort of *Star Wars* thingy in Search? The Millennium Falcon in Cardboard would be sweet! What if Google Translate could decipher galactic languages?"... and on, and on, and on. As this list of ideas grew, so too did the band of passionate engineers and product folks who wanted to build them.

We reached out to our friends at Lucasfilm and Disney, and since then we've been working together on building google.com/starwars. It's a place for fans, by fans, and starting today you can choose the light or the dark side, and then watch your favorite Google apps like Gmail, Google Maps, YouTube, Chrome and many more transform to reflect your path. And that's just the beginning. We've got more coming between now and opening night—the Millennium Falcon in all its (virtual reality) glory included, so stay tuned. And we've hidden a few easter eggs, too. So awaken the Force within, and be on the lookout for things from a long time ago in a galaxy far, far away...

See you in line at the theater in December. I'll be there with my dad.

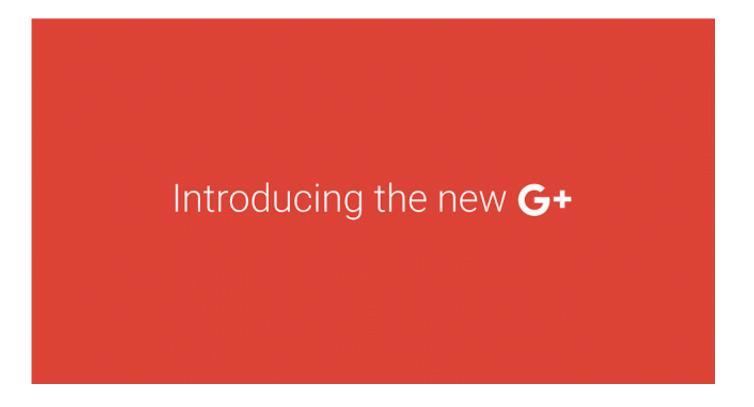
Posted by Clay Bavor, VP of Product Management

## Introducing the new Google+

If you head over to Google+ today, you'll see that things look a little different.

Since we last posted, we've spent a lot of time listening to what people using Google+ had to say. There were two features they kept coming back to: Communities, which now average 1.2 million new joins per day, and Collections, which launched just five months ago and is growing even faster. Whether it's the Nonfiction Addiction Community, where people can be found discussing the best in Crime or Travel storytelling, or the Watch Project Collection, where more than 40,000 people are following an antique watch hobbyist, these are the places on Google+ where people around the world are spending their time discovering and sharing things they love.

And so we've reimagined Google+ to help them do that. Today, we're starting to introduce a fully redesigned Google+ that puts Communities and Collections front and center. Now focused around interests, the new Google+ is much simpler. And it's more mobile-friendly—we've rebuilt it across web, Android and iOS so that you'll have a fast and consistent experience whether you are on a big screen or small one. You'll need to opt-in to this new version of Google+ on the web to see the changes—check out our Google+ post for more on how to give it a try.



Creating great products that solve real needs and make life easier for people is something Google is always striving for. Your feedback got us this far—as we continue to refine Google+, we'd love to keep hearing from you. In the meantime, we look forward to seeing how today's changes help kickstart even more conversations around everything from Zombie Cats to Vintage Calculators.

Posted by Eddie Kessler, Director of Streams

It's that time of year again. Next week, tens of millions of us will hit the roads, consume millions of pounds of turkey, and then spend billions on Black Friday deals. Google Maps looked at Thanksgiving trends from the last three years to uncover the most useful information to make your holiday plans go a little bit easier. Whether you're traveling, doing some last-minute grocery shopping, or Black Friday deal-dashing, here's our day-by-day guide to braving the holiday crowds.

**Tuesday:** No travel day leading up to the holiday is going to be a breeze, but if you can, start driving Tuesday rather than Wednesday. Yes, it's still the second-worst travel day of the week, but according to Google Maps searches, for the last three years Wednesday has been the worst travel day—with the exceptions of Boston (Tuesday), and Honolulu, Providence and San Francisco (all Saturday).

**Wednesday:** Americans are pretty predictable when it comes to the holidays: for the third year in a row, "ham shop" was the #1 trending destination search on Google Maps the day before Thanksgiving. Whether you're running out to a ham shop, pie shop (#2), or liquor store (#3), make sure you don't head all the way there just to find it closed. This year Google Maps and Google Search have added holiday hours, so when you search for a business, you'll see its updated holiday schedule.

**Thanksgiving Day:** Maybe folks were put off by the trauma of last year's burnt turkey? Nationwide, "buffet restaurants" were the #1 trending Google Maps term on Thanksgiving Day. But locally, folks were heading in other directions. In Houston, "doughnut shops" were trending on Thanksgiving. It was "bars" in Chicago— maybe people needed a break from their families. And Miami residents were interested in looking their holiday best—"beauty salons" were among the trending searches by the South Beach crowd.

**Black Friday:** The top Black Friday Google Maps trends nationwide were predictably of the "electronics store" and "outlet mall" variety—with "Christmas tree farms" not far behind as people looked ahead. Digging into local trends, however, things get more surprising. New Yorkers were on the hunt for tattoo shops, among other things, Angelenos for hookah bars, and people in Detroit spent their Black Friday on the lookout for hamburgers. Whether you're in the market for a Christmas tree tat or shopping deals, here's a tip: use the Explore feature on Google Maps to discover the stores, restaurants and local entertainment around you.

The weekend: Traffic patterns show that you're better off driving home from a long weekend on

Sunday rather than Saturday—traffic can be up to 40% worse on Saturday. And Google Maps will be with you all the way home, helping you check out gas prices and add detours to your route, without having to exit out of navigation.

Posted by Pierre Petronin, Google Maps

## Bringing the NYC Veterans Day Parade to veterans across the country

I am a veteran and a Googler. I retired in 2012 after a 25-year career in the military, and this week with Google.org, I helped bring veterans with disabilities, and those otherwise unable to travel, their first virtual reality experience. On Thursday morning, we filmed the NYC Veteran's Day Parade in 360-degree video, and with Google Cardboard, brought together veterans and their families at VA hospitals from Palo Alto, California, to Pryor, Oklahoma to experience the nation's largest Veterans Day parade in virtual reality as if they were there, marching. These #UnitedWeMarch events will continue over the next few days, at VA hospitals around the country.

The virtual parade video is available on YouTube 360 (desktop), the YouTube app (mobile) and via Google Cardboard (also mobile).

It was incredible to reconnect with other veterans and even better to see their reactions to the virtual parade. One Marine who served in Vietnam even remarked, "You just took me away from this hospital room to New York. And you didn't even charge me airfare!"

#UnitedWeMarch is part of the Google Impact Challenge: Disabilities, which has given \$20M in grants from Google.org toward organizations improving the lives of people with disabilities. In honor of disabled veterans, Google.org also gave a \$235,000 grant to America Makes to create a training for military veterans to learn the basics of using new technologies to build personalized assistive devices like 3D-printed prosthetic limbs. This is all in collaboration with the Department of Veterans Affairs Center for Innovation.

I'm so grateful to have been there yesterday, seeing the veterans temporarily escape their hospital beds through virtual reality and experience the crowds cheering them along the parade route. We'll continue these virtual marches tomorrow and into next week, so that every veteran has the chance to be celebrated.

Posted by James Reid, Googler and Google VetNet member

Roughly 60 percent of the world is without Internet today, and even where online access is available, it can still be spotty. That means that quick and easy access to information is still not possible for a majority of the population. This is a huge problem, especially as people attempt to navigate and explore the world around them, so Google Maps is taking steps to help people across the globe find directions and get where they're going, even when they don't have an Internet connection.

Now you can download an area of the world to your phone, and the next time you find there's no connectivity—whether it's a country road or an underground parking garage—Google Maps will continue to work seamlessly. Whereas before you could simply view an area of the map offline, now you can get turn-by-turn driving directions, search for specific destinations, and find useful information about places, like hours of operation, contact information or ratings.

You can download an area by searching for a city, county or country, for instance, and tapping "Download" on the resulting place sheet, or by going to "Offline Areas" in the Google Maps menu and tapping on the "+" button. Once downloaded, Google Maps will move into offline mode automatically when it recognizes you're in a location with spotty service or no connectivity at all. When a connection is found, it will switch back online so you can easily access the full version of Maps, including live traffic conditions for your current route. By default, we'll only download areas to your device when you are on a Wi-Fi connection to prevent large data fees.

We first previewed these new capabilities during Google I/O in May, and today we're gradually rolling out the first set of these improvements with the latest version of Google Maps on Android (coming soon to iOS). Over time, we'll be introducing even more offline features to help you find your way—even when you can't find a connection.

Posted by Amanda Bishop, Product Manager

# **TensorFlow: smarter machine learning, for everyone**

So we've built an entirely new machine learning system, which we call "TensorFlow." TensorFlow is faster, smarter, and more flexible than our old system, so it can be adapted much more easily to new products and research. It's a highly scalable machine learning system—it can run on a single smartphone or across thousands of computers in datacenters. We use TensorFlow for everything from speech recognition in the Google app, to Smart Reply in Inbox, to search in Google Photos. It allows us to build and train neural nets up to five times faster than our first-generation system, so we can use it to improve our products much more quickly.

We've seen firsthand what TensorFlow can do, and we think it could make an even bigger impact outside Google. So today we're also open-sourcing TensorFlow. We hope this will let the machine learning community—everyone from academic researchers, to engineers, to hobbyists—exchange ideas much more quickly, through working code rather than just research papers. And that, in turn, will accelerate research on machine learning, in the end making technology work better for everyone. Bonus: TensorFlow is for more than just machine learning. It may be useful wherever researchers are trying to make sense of very complex data—everything from protein folding to crunching astronomy data.

Machine learning is still in its infancy—computers today still can't do what a 4-year-old can do effortlessly, like knowing the name of a dinosaur after seeing only a couple examples, or understanding that "I saw the Grand Canyon flying to Chicago" doesn't mean the canyon is hurtling over the city. We have a lot of work ahead of us. But with TensorFlow we've got a good start, and we can all be in it together.

Posted by Sundar Pichai, CEO, Google

Author Full Name

Author Title

Author Team

HERO QUOTE GOES HERE

We love highlighting great stories about women's achievements in science and technology. When the story involves a 1940s Hollywood star-turned-inventor who helped develop technologies we all use with our smartphones today ... well, we just have to share it with the world.

Today on Google's homepage we're celebrating Hedy Lamarr, the Austrian-born actress Hollywood once dubbed "the most beautiful woman in the world." Lamarr's own story reads like a movie script: bored by the film industry and feeling typecast, Lamarr was more interested in helping the Allied war effort as World War II broke out than in the roles she was being offered. She had some background in military munitions (yes, really), and together with a composer friend, George Antheil, used the principles of how pianos worked (yep, pianos) to identify a way to prevent German submarines from jamming Ally radio signals. The patent for "frequency hopping" Lamarr co-authored laid the groundwork for widely-used technologies like Bluetooth, GPS and wifi that we rely upon daily.

It's no wonder, then, that Lamarr has kind of a mythical status at Google, and I was pretty excited at the chance to tell her story in Doodle form. This took some tinkering of my own—after deciding on the movie format as a nod to her Hollywood career, I dug through old fashion illustrations and movie posters to try to capture the look and feel of the 1940s. Sketching storyboards on a yellow notepad helped me figure out how to show Lamarr in very different scenarios—movie star by day, inventor by night—which we then animated and set to the awesome soundtrack created by composer Adam Ever-Hadani.

So in the spirit of celebrating women in technology everywhere, here's to Hedy Lamarr, who fused the arts with science and never let herself be typecast. Happy birthday, Hedy, on what would have been your 101st birthday. And thank you.

Posted by Jennifer Hom, Doodler



Day one of sketches and exploration

Storyboard organizing

Alternative ending from an early draft

Author Full Name

Author Title

Author Team

HERO QUOTE GOES HERE

When it comes to computer science, millions of girls are being left out of the conversation. Despite earning the majority of bachelor's degrees in the U.S., women earn fewer than 20 percent of computer science degrees, with serious implications for our economy and for women at large.

The problem of getting girls more interested in tech has many sources, but according to Google's own research, one of them is optics. Girls don't see positive role models of other girls and women in popular culture. In a study of popular films in 11 countries, fewer than 20 percent of computer science or tech roles were held by women.

As someone who runs a company at the intersection of technology and media, I want to help change the perceptions of women and technology we see today. So, as part of our Made with Code and media perception initiatives, I'm excited that we're supporting award-winning documentary filmmaker Lesley Chilcott—of "An Inconvenient Truth" and "Waiting for Superman" fame—on her next film, "CODEGIRL."

"CODEGIRL" follows the story of 5,000 girls from 60 countries as they compete in a global entrepreneurship and coding competition by Technovation. The girls have three months to develop an app that attempts to solve a problem in their local community. In the film, they size up their competition, interact with teachers and local mentors, learn to code, and pitch their ideas all in hopes of winning \$10,000 in funding and support.

Starting today and until November 5, Lesley's film will be available for free on YouTube, before its theatrical debut in the next few weeks. You can watch the film below and use the hashtag #rallyforcodegirl to show your support.

Our goal is to inspire as many students as possible during this special five-day free viewing period before it hits theaters. With your help, we'll be able to inspire more girls around the world to pursue their passions in tech.

Posted by Susan Wojcicki, CEO of YouTube

"How many days until Halloween?" "What should I be for Halloween?"

In the weeks leading up to All Hallows' Eve you turn to Google Search to ask these two crucial questions. So with just days left to perfect a costume for yourself, your kid, your pooch or your partner, here's a look at some of the top Halloween costume trends across the United States. For more, see Frightgeist, our Google Trends Halloween hub.

## Hair-raising

If your costume involves a certain familiar 'do, prepare to have company. Get-ups based on the bombastic GOP candidate for President are spiking, with the top-related search being "Donald Trump wig." And don't go looking for blue or purple hair-dye at the last minute on Saturday: chances are it will already have been bought up by kids dressing up as Disney's "Descendants" characters Mal and Evie.



And if you're aiming for a unique costume, you might want to avoid buns on the side of your head too. "Star Wars" is the second most searched costume nationwide, and within that Princess Leia reigns supreme above Dark Side standbys Stormtrooper and Darth Vader.

#### Superhero Squad

"Suicide Squad" may not hit box offices until next summer, but one character from the film is already making a killing in costume searches. "Harley Quinn" takes the top search spot nationwide (rival Batman is in fifth place). But Harley and Bruce Wayne are just a few of the superheroes (and super villains) you can look for this weekend: People are also donning their cuffs for Wonder Woman, their

creepy facepaint for Joker, their bodysuits for Catwoman, and their half shell as Teenage Mutant Ninja Turtles (T-U-R-T-L-E Power!). Even lesser-known characters like Scarlet Witch, Vision, Wasp are getting a boost from film franchises like "The Avengers" and "Ant-Man."

### **Frightful Fidos**

"Dog costume" is always a top search around Halloween—but not because you're dressing up as Snoopy or Scooby. No, you're searching for the cutest costume for your four-legged friend. In addition to being adorable, the top dog costumes are just as "Star Wars"-filled as the top human costumes. We assume that's because they've already got the fur and/or ears to make it work.

If dressing your pooch as Chewy feels like asking for trouble, other popular canine costumes include "lion," "dinosaur," "shark" and ... Olaf. Because—ahem—you still can't let "Frozen" go.

#### Better together

When you want a partner in crime or just want insurance against looking silly solo, couples costumes are the way to go. This year, you're dressing up as famous pop culture pairs like Bonnie and Clyde (the top couples costume overall), Jasmine and Aladdin, Woody and Jessie from "Toy Story," Danny and Sandy from "Grease," and Barbie and Ken. You're keeping that Halloween realness with searches for Gomez and Morticia Addams and Beetlejuice (#2 on the list, and based on Google Images subject to lots of interpretation). And you're bringing new meaning to the phrase "I'm dressing up with my boo" with searches for a "Boo and Sully" costume from "Monsters, Inc."

#### The treat in "trick or treat"

Even for adults, Halloween is an excuse to eat junk food. In the past month you've searched for candy corn, candy apples and Halloween variations on all of your favorite sweets, from donuts to pudding cups to Kit Kats. But one candy reigns supreme: marshmallows (no, not that marshmallow) are the top searched candy over the past month.

Posted by Emily Wood, Managing Editor, who, despite the above, is still taking recommendations for this year's costume

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