

# New Year Resolution



## New Year Resolution



As we enter in new year, it's time to set out to better ourselves. Yes! You heard it right, it's time to make a new year resolution which is, as they say "a triumph of hope over experience". However, this time it has to be different as we are living in a time which is passing by so fast that it doesn't allow us

to pause for a moment and ponder upon. So, let's change the tradition by indulging in mind provoking few minutes and give the idea of new year resolution some real meaning. Let's make all those typical resolutions like losing weight, eating healthy, saving more money, achieving bigger goals, being social, being closer to God and others atypical by making a proper plan.

According to the most recent research, adopting new year's resolutions gives people a greater sense of achievement than not setting any goals. The study also concluded that people working on weekly mini-goals accomplish more fruitful results in a bigger scheme of things. The idea of weekly resolutions permits easy follow up and repetitive reminders. Let's make a sincere effort and follow the concept of weekly resolutions by dividing our goals.

For example, the most common new year resolution is eating healthy so let's subdivide the goal by making a plan. How you are going to handle this on the weekly basis. Let's make a plan in which you will eat all greens on Monday and on Friday would be the cheat day so that you can enjoy your favorite glazed donuts too. You can adopt similar rules with other days of a week. May the odds be in your favor. **HAPPY NEW YEAR!** ■

## An In-Depth Look Into How do Fingerprint Sensors Work?

Smartphones and other digital devices are fabricated, oriented and made to glitter further with the latest and updated version of technologies. One such very recent invention, fingerprint sensing, has glorified the sensations of digital devices. Fingerprint sensing adds



glides and glories of digital equipment. A scanner reads out the already stored information of a thumb or a finger impression and unlocks the device for use. It's a technique which saves users time and acts as an 'add-on' feature to assist mainstream features of the device. Phones and digital devices become less vulnerable to thefts too as fingerprinting scanning security lock requires unorthodox types of equipments to break through the security system and still may not win over for the final laugh. Fingerprint scanning has multiple dimensions and arenas. Fingerprint scanners use either light or an electrical impulse to compare and contrast with the already available data for allowing or rejecting a cause of sneaking into the pros and cons of a digital device. Fingerprint sensing is a digital input mechanism which reads the finger impression and processes to generate an image which is then worked out by the fingerprint matching software for final decision.

Light rays were used initially to detect the fingerprint followed by capacitive mode of scanning leading to the ultrasonic fingerprint scanning modes. Optical scanners emit light to detect the finger or thumb impression but became obsolete because of bulky infrastructure. Capacitive scanners predominantly encompass most of the modern day digital devices because of creating more secure zones to avoid thefts. Very recently ultrasonic scanners are making serious inroads leading to utmost

refinement and sheer class. A beam of light is shed when the finger touches the screen of a digital device to record the footprint as a 2D image in optical scanners. They become less secure resultantly because they can be ditched by using different image patterns. Capacitive scanners, on the other hand, variation in electrical charge are detected by a series of fine capacitors placed right behind the conductive plates to exclusively determine the legitimacy of the user. An ultrasonic pulse is generated as finger comes into contact with digital screen which is read and interpreted by the receiver for final consent.

Subsequent wear and tear in pores and ridges of (human) finger aren't read by the machine which leads to inadequacies and frustrations. Finger and thumb impressions do have a tendency to change over a period of time but the scanner remains indifferent to any subtle changes. Additionally, biometric scanning machines are vulnerable to indiscrepancies as multiple touches cause machine to misread information and may grant unauthorized access. Human finger and thumb ridges and pores vary in size, quantity, and dimensions with the growing age. This change doesn't automatically transfer to the fingerprint scanning mechanism. Biometric machines are placed in numerous organizations to record the movement of the employees. Hundreds of interactions a day make machine vulnerable to allow unwanted access or rejection which leads to uneasiness, time and again.

A fingerprint scanner is a time-saving technique to ease out the task of a digital user and that of the management in organizations and industries with some limitations. Fingerprint scanning infrastructures result in price hikes of the digital devices and can degenerate the overall quality, speed, and flow of the device. ■

## Beware ! Apps can Steal Money

Did you know that you can get robbed just by installing a specific app? About 30 apps have been discovered on Google Play Store with banking malware in them. Now, what to do to avoid from such a breach? The security experts suggest to all those who continuously download apps, to keep a check on their bank accounts for any mysterious transactions and consider to change their internet banking PIN/password. Secondly, before downloading an app, check the reviews and comments of people and don't just accept and give any permissions to the apps you are installing, first read them and then press allow. ■

## Changing Objects Into User Interface

Imagine a wall that can turn on your home audio system or used to decrease the volume of music just on a finger tap and a wooden kitchen table to be used to control lighting, isn't it cool?. A London-based startup HyperSurfaces has just met this lofty goal to transform any object into a user interface regardless of material, shape, and size. HyperSurfaces system is engineered to detect vibration via sensors upon touching an object while sensory information processed with neural network algorithms on a chip. According to project lead: "Every time we interact with an object, we create a distinctive vibration pattern which dedicated sensors coupled with our patented algorithms, can transform into digital commands". This technology will likely end users reliance on keyboards, buttons, and touch-screens by linking them with a computer system virtually like a conduit and will revolutionize IoT, retail, transportation and augmented reality domains. ■

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## Did You Know?

Did you know that not each product of Google is crowd-pleasing? Tech giant loves to make the experiment to encourage development and insights which lead to both achievement and failure. Google Cemetery provides the list of such 40 dead services that didn't have a money-making potential or are being discontinued and replaced in 20 years of Google's history. The website <https://gcemetery.co/> clarifies the reason for which these services were scrapped or replaced. For example, Google Video moved to YouTube, Picasa upgraded as Google Photos and Google+ will soon join the list over low user engagement. ■

## Making Presentation Inclusive

Microsoft is bringing Live Captions & Subtitles in PowerPoint which will enable deaf and hard of hearing community to read presenter's speech in real time. In addition, captions and subtitles will also allow non-native speakers to translate speech into a language of their choice and speech recognition technology will enable them to understand what's being presented in PowerPoint. It supports only 12 languages for now but will be able to show the captions and subtitles into more than 60 languages. ■

## Tracking Endangered Species

AI-based solutions are designed to boost up human efforts. Nowadays, the main challenge for scientists and researchers is how to harness the power of artificial intelligence to save species from extinction and solution is their footprints. WildTrack researchers have a tool footprint identification technique (FIT) to monitor endangered species using digital images of their footprints. Customized mathematical models are being used to analyze the measurement of these images which showed the high level of accuracy in telling a complete story of species, their age-class, and sex levels. ■

## Using AI to Suggest Best Emojis

Google has rolled out a new feature in Gboard that will suggest the emojis and GIFs based on the selections of the words you are typing. For example, if you type "happy birthday" and tap on the GIF icon it will automatically show the related stickers and emojis. On the other hand, on typing "I am sorry", the keyboard will automatically show stickers with a sad expression. Google uses its own AI to analyze the words typed by the user. To

use the Gboard just tap the GIF icon showing on the Gboard, type the words and then there will be a collection of emojis and GIFs appeared, which you can choose to fit into the message. ■

## Introducing Fluoride Battery

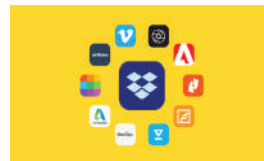
Fluoride is considered a suitable substance to use in batteries for being 10 times denser than the conventional lithium batteries. NASA, Honda and Caltech engineers have developed a new electrolyte 'BTFE' that could resolve the fluoride at room temperature and is able to be discharged and recharged at the room temperature. The fluoride-based battery will better perform in the winter because it can adjust itself according to room temperature and will be more helpful in driving electric cars. It can last for more than one week if used in mobile phones. The prospect is exciting but still, there are some hurdles to take the project to fruition and the team is hard at work to find the solution. ■

## Palm-Sized Phone

Yeah, it is really that small. It seems that the age for Palm phones is coming back. It is basically going to be a companion phone to your smartphone, same as a smartwatch. It has all the essential features to keep you connected. We all get distracted from our main aim of using a phone, by all the apps and social media. By this phone, you can avoid such distractions. It has many other benefits over the big phones, it is quite lightweight and skinny whereas the big astonishing fact is that it is about half the size of today's smartphones. Coming to rest of the specs, a 12MP camera is featured at the back, and 8MP front-facing camera, a 720p 3.3-inch LCD display is there, with which you can read things on the screen, a nano-SIM slot, a USB Type-C port, and just one power button that can be used to multitask. ■

## Dropbox Launches Extension Feature

Dropbox has just launched a latest feature called 'Extensions'. Dropbox Extensions come as third-party software plug-ins that will make Dropbox's work even easier. The most interesting part is that before the availability of Software Extensions to perform a task, the users were supposed to open and use multiple apps, but now this feature will enable its users to perform any task, they need to do, without



leaving Dropbox anymore. In addition to that, it will allow its users to sign a PDF, to edit photos and videos too. These Extensions will be launched at the end of November and will be found by using an "open with" drop-down list. Dropbox has collaborated with Adobe, Vimeo, DocuSign, among others to generate new Extensions. ■

## Quick Facts

- **Google Lens** can now detect over a billion items in images.
- **Remove.bg** is a free online tool to remove images' background.
- **Google's** Chrome Canvas app is a digital easel to make quick doodles.
- **☹️👉👈** kaomoji will arrive soon on Windows 10.
- **E Ink's** new JustWrite display offers more natural scribbling.
- **Opera** on Android gets cryptocurrency wallet integration.
- **Gboard** now allows users to type in 500 languages.
- **Samsung** announced Android Pie update for the Galaxy S9 owners.
- **NASA's** Voyager 2 is the second spacecraft to enter into interstellar space.
- **Boomerang** support and selfie mode are now available on Facebook Messenger.
- **An autonomous** robot caught fire while delivering an order in California.
- **Kroger-owned** grocery store is now offering driverless deliveries.
- **Samsung** has plans to introduce Night Sight clone dubbed as Bright Night.
- **Non-G** Suite users now have access to collaborate as 'visitors' in Google Drive beta.
- **Huawei** released its latest smartphone Nova 4 with a hole-punch display and a 48-megapixel camera.
- **World's** first 5G group video call is Oppo's latest milestone towards the progress of 5G smartphones.
- **Xiaomi's** new phone 'Mi Play' has launched with a circular camera notch, dual rear-facing cameras, and free 10GB monthly data.
- **Microsoft** announced live captions & subtitles feature in Skype video calls to help those with hearing impairment.
- **RePaint** is a new project of MIT researchers to recreate paintings from photos using deep learning and 3D printing.
- **Google's Squoosh** is a powerful image compression tool to cram images into a smaller size without affecting its quality.
- **China's** 'Chang'e 4' is the first spacecraft landed on the far side of the moon. The touchdown is a major technical feat and historic step for space exploration. ■



## Animoji vs AR Emoji vs Playmoji

Mobile companies are always in hunt for innovative ideas in order to compete in the growing digital era. From introducing new apps to making the phones secure and equally enjoyable, they have totally changed the mobile-tech scene. The main factor is competition, for example whenever one company launches anything innovative, the other has to provide its users with something extraordinary in order to compete. Likewise, Apple launched iPhone X which brought Animoji, Samsung recently released its own AR Emoji and Google made changes to its AR stickers and created Playmoji.

Animoji, AR Emoji, Playmoji are animated emojis that let the users change themselves into their animated versions. These personal emojis can be shared on different social media platforms which will represent you. There are a few features which differentiate both the emojis from one another.

### Animoji

When Apple launched iPhone X, it's one of the most amazing features was Animoji which let the users have exciting conversations and amazing time.

- Animoji uses the multi-camera array which tracks the fine details of facial expressions so that the emoji can be perfectly accurate. The emoji makes you become whatever character you want to be by those scanned fine details.

- You can use Animoji by recording a minimum of 10-seconds video on the messaging app. That video with amazing animated emoji can be shared easily on social media.

- On top of sending exciting videos to your friends, there are a few more amazing things that you can do with Animoji. One of those things is the third-party uses of the Animoji, which help the users make even more creative Animoji-self.

### AR Emoji

Samsung has recently introduced its latest AR Emoji feature, which is happened to be amazing with the core purpose to compete the already made Emojis.

- AR Emoji uses the front-camera along with highly advance software tricks to detect the facial movements of the user. Those software tricks help in mapping out the facial movements of the user accurately.

- The most incredible feature of AR Emoji is that it let the users create their own personalized emoji. By personal it means the user can pick its own color tune, outfit, hairstyle, hair color, and everything.

- Galaxy S9 has this whole AR sticker collection where all the AR Emojis are being saved to use in the future. It also turns that AR Emoji collection into 18 GIF to easily share on the social media apps.

### Playmoji

Last Year Google introduced mind-blowing AR stickers and it has introduced Playmoji by doing amazing changes to those stickers.

- As Google is highly advance in artificial intelligence so it has made the Playmoji entirely in 3D by using mind-blowing object recognition softwares.

- Google has introduced amazing Playmoji packs wherein it let the users pick from a selection of favorite movie characters, pets in cartoonish form, comic strip-style sports animations, visual and interactive signs, and trendy weather effects.

## Sneak Peak

Coming up in February Issue

Remote Sensing

Wifi 6

CES 2019 & a lot more

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- Playmoji has miraculous suggesting feature that offers new 3D AR emojis to fit in whatever the scene is happening at that time. ■

## China's 'AI News Anchor'

China's state-run press agency, Xinhua, is here with another surprising creation which is the world's first AI news anchors. The artificial intelligence generated presenter looks like a real human presenter having a natural voice, facial expressions and actions. AI presenters will be able to learn from live streaming visuals and can read out content just like real professional news anchors. Still, technology has some limitations as AI anchor's voice and facial expressions somehow seem unreal. According to developers, AI news presenters can be used to generate news reports at low budget. Moreover, AI anchors could work for 24 hours a day. ■

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