Role of Technology in Overcoming Language Barriers

Hello
Ola

Ciao
Salut

Witaj
Bonjour

An In-Depth Look Into

The Role of Technology in Overcoming Language Barriers

We are living in a global village. Social media, online gaming zones and gadgets allow people to communicate and integrate, irrespective of their demographic origins. Physical boundaries of nation-states become obsolete when it comes to the digital world. Language is the prime source of connectivity between people from different socio-political, ethnic and cultural backgrounds. Machine learning has been streamlined to automate the process of digital communication in multiple languages; translators too can recognize a sound byte and translate accordingly. 'Google translate' may be the most frequently used software, but is certainly not the last. The 'word lens' is an add-on locomotive in Google translate, whereby a high-quality mobile camera can detect and read out a word in a certain language and translate in the native language of the user. The Google Maps tool is envisaged and linked up with 'translate with Google' to give a clear picture and understanding of the senders call or message. Machine learning and advanced versions of neural networks allow direct verbal interactions with smart devices to translate a word or syntax in most of the global languages without any mediator or human interpreter.

Auditory sensations are heard, processed and interpreted and finally translated within a few seconds with the application of neural networks, machine learning systems. Computers with artificial brains (artificial intelligence) are able to recognize a sound, its grammar, and pronunciation to translate into the desired language. Applications such as Google Translate; Microsoft Translator and a few others provide the user with the opportunity of having a verbal chat with the computer or a digital device. The application will decode the words and translate with some sort of precision. Google has introduced pixel bud, ear-plug-ins, which can be considered as an enhanced version of neural networks to detect, interpret and translate a sound.

Machine learning and the resulting translation mechanisms are a healthy source of promoting business and enhancing the educational standards. An organization can expand its business and retail and a student would not suffocate for knowledge because of an alien language. Multinational organizations will not be requiring a physical infrastructure and the use of human translators to expand their business in a foreign country with a different native language. A school, college or a university student need not to rely on indigenous sources of knowledge only, once the language barrier is removed.

Communication is the bottom-line of any business outfit. The owners and the stakeholders can reach out to the market industry in no time courtesy of translation apps and can respond to customer's feedback from diverse origins. An educational system can broaden its range, size and applicability by integrating neural networks and machine learning mechanisms in their school systems.

Humans alone cannot cope with the growing demands of multilingualism, Google and other media have released humans off all translation inconveniences. The art of machine learning is personified; computers with artificial brains now can listen with efficacy and efficiency to make precise translations. ■

Yasir Hayat

YouTube Hacks to Simplify Your Experience

Whenever a person wishes to learn anything from cooking to other crafts, they just switch on YouTube and there is everything for people of all interests. Sports lovers open up YouTube to get news about their favorite sportsmen and people who wish to stay up-to-date can get to know about the latest fashions. It is not just for the new generation, but

YouTube is also for old people to refresh their memories by watching old films. Here are 7 quick tricks to help your YouTube experience better.

1. Go 10 seconds back or ahead while watching a video

In case someone missed out a scene or a person wishes to skip extra details in a video than they can easily go forward or backward while watching a video on YouTube. To move the video 10 seconds forward, tap two times on the right side, whereas, double-tapping on the left side takes you 10 minutes back.

2. Change the video settings

Three dots are present on the right-hand corner when playing a video, you can tap that to change different settings. The things you can adjust are video quality options, turn captions on or off and change the playback speed.

3. Save your time by keyboard shortcuts

Keyboard shortcuts are a very handy tool on the desktop to speed up your task. YouTube also has numerous keyboard shortcuts for faster user experience on a laptop or computer. Pressing **M** mutes the current playing video, **K** pauses a video, **J** moves you 10 seconds ahead and **L** rewinds 10 seconds. You can move to different points in a video by pressing the number keys, for example, by pressing **2**, you will be moved to the 20% mark in a video and pressing **7** will take you at the 70% mark and so on.

4. Save video to watch it later

If you have a desire to watch some specific video and do not have ample time at the moment, then you can put it in a watch later playlist to access it anytime from desktop or mobile. Hovering over its thumbnail and clicking on the small clock icon at the top right corner will place that video in "Watch later" playlist.

5. Have a dark-themed YouTube

If the background of the YouTube app is turned black, then the colors of playing videos become more clear. You can toggle this feature, named as "Dark Theme" in YouTube by simply going to "Settings" and then clicking on "Dark Theme" option.

6. Make your experience more efficient

Selecting the right keywords and punctuation saves time and makes the user experience on YouTube better. For three-dimensional results, add the word **3D** along with the query and for high-definition results, add the word **HD**.

7. Switch between videos easily

You can simply go to the next video by swiping right on the screen and play the previous one by swiping left on the screen. ■

Maleeha Haris

Turn Your Arm into a Touchscreen

Devices, which turn a human arm into a touchscreen, seems to be written off as science fiction but this somehow become a reality now with LumiWatch prototype project by Carnegie Mellon University researchers. LumiWatch is a smartwatch which is engineered to provide an interactive experience on the wearer's arm and offers them to tap and swipe on the skin to open and control apps on the smartwatch. LumiWatch offers an interface of nearly 40 square centimeters-five times more than the traditional or typical smartwatch display-and runs on Android 5.1. It features nonstop 2D finger tracking along with rectified graphics, 740 mAh lithium-ion battery and a lot more. ■

Dual-Cameras Enigmas

The dual camera has become a regular feature among high-end devices but is it really effective? The answer to the question is a big yes! The dual-camera setup is the real deal which is only found in expensive phones like iPhone X. Two lenses of two different apertures are mounted together and are operated on an image combining software just like it did with the High Dynamic Range (HDR) mode. One lens is designated to capture the details of the image while the second lens is bound to catch more vibrant colors and then combine these two images to provide you with a breathtaking image. The dual-camera setup is no longer a luxury as low budget smartphones have taken this feature as one of their own. The result, however, won't be as good as the high-end smartphones but it still works great. ∎

Stop Straining Your Eyes

Modern computing tricks have made it pretty easy to fix the font size on Android and iOS, and the web to comfort users to put less strain on their eyes. To increase the text size on android, move to Settings>Display> and tap Font Size to select the desired one. To enlarge the text on Chrome browser on Android, tap the three-dot icon on the right side and click on Settings> Accessibility and adjust the Text Scaling slider. A system-wide magnification feature is also available to zoom any area of phone screen except keyboard and search bar. Tap Settings>Accessibility> Magnification and turned it on. Desktop browsers have easy and faster keyboard tricks to increase the font size like press the Ctrl button and plus (+) key on Windows System to make text larger in Chrome, Internet Explorer, Firefox, and Microsoft Edge or press Ctrl button and minus (-) key to reduce the text size. ∎
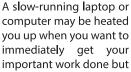
Clearing Up Cache Data

Clearing the phone's cache seemed to be a good idea when apps start behaving weirdly and we want to acquire the things back to normal or especially at times when the trick free up some memory on the phone. The cache is actually the store data related to installed applications on phone e.g. files, images or scripts which will make the information easily available on next visit to an app or a website. Though downloading apps to clear cache is a good option but it can easily be done manually. Just open up phone Settings and scroll to Storage. The list of phone data allocation will appear with size including Downloads, Apps and Cached data options. Press the Cached data and hit ok, all app cache will be cleared up. In some phones, Storage menu doesn't have a direct cache data option, instead, tapping the label 'Free up space' automatically removed the unnecessary cache data of the phone.

If phone behaves a little sluggish or prompting the need for more space than go to 'Other apps' option and select the app to clear. A new menu will be displayed with Clear Storage and Clear Cache buttons. Clear Cache will clean up the data associated with the app and will erase saved content which needs to be re-downloaded on next visit. However, clearing cache is a lot easier and handy to fix app and storage problem within no time. ∎

Speed Up Your PC

A slow-running laptop or computer may be heated you up when you want to immediately get your important work done but it will be stuck. However, before flinging the gadget out of the window in a fit of fury, try out the methods to run it faster. Restart a computer/laptop might be a good solution as if it keeps running for long then restart option proves 99% effective. However, if still the computer running slow then reason would be startup apps like antivirus programs and Skype which opened up automatically and slow down the PCs performance. Go to start menu, type 'run', select 'Run', wrote 'msconfig' in the pop-up window and click open. A list of all programs starting automatically appeared, disabled unnecessary programs.

Sometimes PC performance affected with a virus intrusion. Regular scanning keeps a PCs speed maintained and quarantine off harmful content. Full or nearly full memory storage also caused a PC to run slow but important data can be stored on Google Drive and by using cloud services which are available free of cost. If still a lot of data left then go and buy an external hard drive. Disk defragment and disk repair also works well to run the gadgets quickly. Lastly, if none of this trick works and you are using your PC or laptop for years then bite the bullet and buy a new one. ∎

Quick Facts

· **Samsung** released Galaxy Watch Active 2, advanced version of the original.
· **Walmart** is planning to take on Amazon in India by introducing a new video streaming service.
· **ZTE** beats Huawei in the home market with the launch of first 5G phone, Axon 10 Pro 5G, in China.
· **Facebook** will soon rename WhatsApp and Instagram by adding its brand name 'From Facebook'.
· **Tesla's** new Model S and Model X orders are coming with a useful perk for buyers: free unlimited supercharging.
· **Dark theme** and improved sleep tracking are now available on Google Fit.
· **SpaceX Falcon 9** sent into space in addition of tiny package to turn all cell phones into satellite phones.
· Google's **Pixel phones** will soon start using text-to-speech technology for emergency calls.
· The top-line feature in **Bird's** new electric scooter is a new battery.
· **Google products** will be prepared from 100% recycled material from 2022.
· **Apple Card** is scheduled to arrive this month in a digital and a physical titanium card format.
· Google has released **Chrome 76** with Flash blocked by default and Incognito mode tracking disabled.
· **Verizon's** 5G network further expanded in Atlanta, Indianapolis, Detroit, and Washington.
· New **Cortana** app has been released for Windows 10.
· **Samsung** will reportedly launch Galaxy Fold in September.
· **Gallery Go**, a lightweight substitute of Google Photos, is now available on Play Store.
· **KaiOS**, the operating system in phones like Nokia 8110, finally gets the official version of WhatsApp.
· **Google Assistant** overhauled with new functionality, it can read out and respond to WhatsApp messages.
· **Asus's** designed new ROG Phone II on the gaming bonafide along with latest components.
· **India's** first moon landing mission has successfully launched.
· **OnePlus** teams up with Sprint to bring a 5G phone in the US soon.
· **4G** access will be provided to London's underground tunnels next year.
· **Elon Musk's** strategy to build mind-reading implants finally stepped out of the shadows.
· **Google** has ditched its trips travel planning app.
· **Huawei** is likely in process of designing its own in-house operating system dubbed as Hongmeng.
· Google unveiled 'Live View', an AR walking directions feature on **Google Maps.**
· Google is offering students to enjoy free **YouTube Premium** for three months.
· **Sonos** new Bluetooth speaker will expectedly arrive in this fall. ∎

How 5G will Transform the World?

We are living in an era where the sky is not even the limit when it comes to new technologies. Even after introducing thousands of latest life-changing technologies, experts are not stopping anytime soon. Likewise, after almost a decade of struggle experts have finally launched the 5G technology. However, a very few carriers are able to turn on their 5G networks but it's finally here. '5G technology is the fifth (advanced) generation of cellular tech which has the ultimate potential to provide great coverage, higher speed and enhanced responsiveness to the wireless networks.'

It's all about the spectrum which controls how 5G works in different circumstances. 5G uses the highly advanced (high-frequency) spectrum which has higher capacity but shorter range. Therefore, experts have somehow addressed the range issue by using lower frequency spectrum so that 5G can reach to greater distances and through the obstructions. Now, 5G is finally able to provide high speed and can easily reach to long distances within the matter of nanoseconds. Moreover, one of the networks Sprint has also claimed that it has the biggest 5G as it is using the spectrum of 2.5 gigahertz.

5G will change the world by giving the users access to connect as many devices as they want and the speed won't be affected at all. It is specially designed to operate the equipment used by various businesses for example agriculture. In fact, it will positively impact every industry like production, healthcare, fashion, emergency services, transport, finance, energy, trade, and others. 5G will give advanced connection to the equipments which don't need the connection all the time but at specific times. These kinds of equipments work perfectly fine for over a decade if they get the right connection and now 5G will make that happen. Economists have given the estimate that the global economy will reach 12 trillion dollars by 2035 in the world of 5G tech.

If you are wondering whether your current cellular device can connect to the 5G then there's a bad news for you as 5G technology requires a set of specialized antennas that aren't available for the users yet. The most recent 5G phones are Samsung Galaxy S10 5G, Oppo Reno 5G, OnePlus 7 Pro 5G, Xiaomi Mi Mix 3 5G, and others. Moreover, 5G doesn't have any other specific disadvantages other than hacking and scamming. Some of the reports claim that the spectrum used in 5G can cause cancer but it hasn't proved yet. ∎

Atiqa Nasir

Future Vision

How would you react if you see a person, just like you, speaking a foreign language in your voice? Or if everyone on the globe can understand a world leader's speech in their native language. Thanks to Microsoft's efforts as in a revolutionary breakthrough, it has unveiled an incredibly life-like hologram which can convert a person into a digital speaker of another language. The tech giant has used its Azure AI, mixed reality and neural text-to-speech technologies to make this happen. This technology will surely end the language barriers between the speaker and the audience. ∎

Brain Keyboard

Facebook envisions such a brain-computer interface that allows people to type by thinking words. Stanford University researchers have applied the same way on paralyzed patients but electrode implantation in the brain is required to get it done.

However, Facebook will surely create a less bulky and invasive brain-computer interface. The social network is not the solo company working on computer-brain interfaces. Elon Musk's Neuralink has also revealed the strategy to link the human brain to computers. Facebook is moving closer to the success of the project which it announced back in 2017 but the vision is not likely to become a living reality anytime soon and recent progress is the first step of the social network toward delivering on its promise. ∎

Skylite Bulletin

- The voice female graphic designers Aalia Noreen and Sadaf Jan have passed their BS Graphic Designing Degree program with distinction. Miss Sadaf received immense praise from internal and external evaluation team over her work in Pink Salt. We wish them the best of luck for their future endeavors.
- Rana Tahir Ahmad, Manager of ITOPPS, suffered from a serious heart attack a few days ago. By the grace of Allah Almighty, he has returned home after successful heart surgery in Tahir Heart Institute. May Allah bless him with quick recovery and good health!
- SIIT Manager, Mr. Farrukh Rehman got engaged. We congratulate him and wish him a happy life ahead. ∎

Sneak Peek
Coming up in September issue
- **Huawei's HarmonyOS**
- **What is an API?**
- **Kids Corner & a lot more**

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