



**VIDYAVARDHINI'S
COLLEGE OF
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AMAZON, IBM AND MICROSOFT RACE TO BRING GLOBAL ACCESS TO QUANTUM COMPUTING

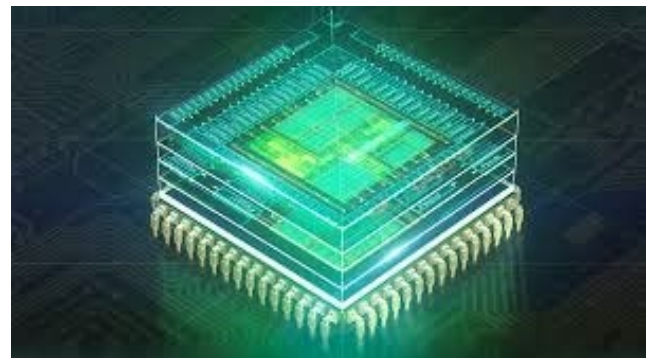
In the heady world of quantum computing, there's a race afoot. Across the globe, tech giants are building their own machines and speeding to make them available to the world as a cloud computing service. In the competition: IBM, Google, Microsoft, Intel, Amazon, IonQ, Quantum Circuits, Rigetti Computing and the newest to uncloak its quantum computing plans, Honeywell.

They're all competing to show off their nascent ability to tackle a new class of complex computational problems.

If one player does get ahead, it could cash in on a computing revolution the way IBM did with personal computers and Apple did with smartphones. Quantum computers won't displace conventional machines, but they could offer breakthroughs impossible for classical computers to achieve, including developing new materials, cutting city traffic or making a fleet of trucks deliver packages more efficiently.

Analyst firm Tractica expects spending on quantum computing to surge from \$260 million in 2020 to \$9.1 billion by the end of the decade.

So who's in the lead? "It depends on the week or the month," said Dan Garrison, a technology architect in the quantum practice at consulting firm Accenture. He says the quantum cloud players are all neck-and-neck.

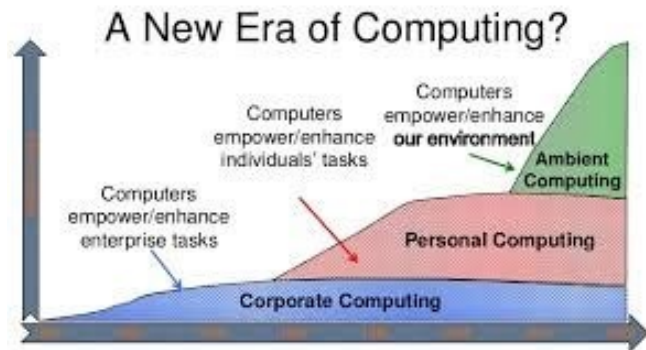


Quantum computing companies have embarked on a multiyear journey to increase the count of qubits, the foundational elements of quantum data processing, and to decrease the error rates that today limit the sophistication of quantum computation. While conventional computers store data as bits that can be either a 0 or a 1, qubits can store a much more complex state that combines both 0 and 1. That design in principle lets quantum computers explore many more solutions to a possible computing problem at once.

WHAT IS AMBIENT COMPUTING, AND HOW WILL IT CHANGE OUR LIVES?

Ambient computing is one of Silicon Valley's latest tech buzzwords. It refers to technologies that allow people to use a computer without realizing they're doing it. We'll explain more about it, and how it will impact our daily lives.

Over the last few years, technology companies have been pushing to deepen the integration of computing platforms with our daily lives. One of their goals is to assimilate computers into our surroundings to the point that we don't notice we're using them at all.



Referred to as “ambient computing,” these technologies perform computations for you without a direct command. As ambient means “in your environment,” these devices are intended to be so integrated into your surroundings that you’re no longer conscious of them. This is significantly different from smartphones and smartwatches that we must actively check to use. Most computing systems rely on active input from humans. For example, if you want to search for the movie schedule on your phone, you type the name of the movie and the cinema in the Google search box. If you want to make your home a little cooler, you can manually set your air conditioner to the desired temperature with a remote or mobile app. The goal of ambient computing is to eliminate friction between you and the computer. Instead of actively setting or interacting with devices, you would interact with your surroundings, and the devices would respond to your actions. For example, with an ambient smart thermostat, the device judges the room and your interactions with it to adjust the temperature as needed. Ambient computing uses a variety of technologies, including motion tracking, speech recognition, gestures, wearables, and artificial intelligence to achieve this goal.

TURKEY DEVELOPS OWN FINGERPRINT DATA COLLECTION TECH, IMPLEMENTATION PLANNED FOR APRIL

The Biometric Data System project carried out as a joint venture among Turkey's leading defense contractor HAVELSAN and the Interior Ministry's Police Maintenance and Provident Fund (POLSAN) has been completed and will be delivered for use at relevant institutions in April, the chairman of the defense company said. The domestically developed system allows for the carrying out of all stages of the

fingerprinting process, with extra technological features.

HAVELSAN Chairman Ahmet Hamdi Atalay said the project had been undertaken by a joint company established by HAVELSAN and Polsan for the production of the technology, which has grown in significance in line with global efforts aimed at shoring up the protection of personal data.

The product, the work of a team of entirely Turkish engineers and developed in line with international standards, will cover all stages of the tracing process, from data collection to identification. It will be used by Turkey's General Directorate of Population and Citizenship Affairs, the country's immigration authority and relevant divisions of the General Directorate of Security, Atalay said, noting that this way, large amounts of license payments usually paid for technologies from abroad will remain in the country's coffers.

Speaking on the possibilities of exporting the technology, Atalay said they had already discussed the development with Qatari officials, while meetings with several other countries were planned.



“There is a high demand for the product as the importance of protecting personal data is increasing,” he said.

HAVELSAN began its operations in 1985 with 98% of its capital owned by the Turkish Armed Forces Foundation.

HAVELSAN is active in the areas of softwareintensive systems and has focused on Air Defense, Naval Combat, Simulation, Training and Management Information Systems, Energy Management Systems and Homeland

Security within the context of Command, Control, Communications, Computer, Intelligence, Surveillance, and Reconnaissance systems (C4ISR).

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WHAT IS AWS CODEDEPLOY?

Fast deployment of code is a major advantage in business. With so much competition, a multitude of platforms and services, and an enormous number of users connecting and using smartphones and other mobile devices, it is an opportunity to scale up and reach a wider audience. When you have a seamless and efficient way to deploy code, it means the business gets a boost and thrives in ways that encumbered processes don't allow.



Think of a small company just starting out with a new social media app, one that intends to take on TikTok and capture a younger audience. There might be multiple services, servers in various locations, an on-premise IT infrastructure that is tricky to maintain – in short,

it's not so easy. While the idea might be sound and the business requirements are clear, it is hard to deploy the code on servers where it can run reliably and where version control is not a Herculean task.

AWS CodeDeploy is a way to solve that problem, allowing companies to deploy apps on an infrastructure that runs using cloud services or in an on-premise facility in a way that is much easier. The goal with any new app, including a TikTok competitor, is to focus more on what the app can do and accomplish for the user, even if it's watching short, entertaining videos. It's not in trying to deploy the app so it is available for endusers at all times and runs reliably.

CodeDeploy can help you deploy apps on Amazon EC2, AWS Fargate, AWS Lambda, or your on-premise infrastructure. To understand what CodeDeploy does, it's important to briefly cover what each of those services from Amazon do and how they help your company.

ECS (Elastic Compute Cloud) is a well-known infrastructure for running virtual servers in the cloud. It's a way to rent the compute power you need to run applications that are reliable, available, and secure. AWS Fargate is a serverless compute engine that handles the compute resources you need and can scale according to your needs. AWS Lambda is an event-driven, serverless infrastructure that only deploys apps and services when they are needed.

Companies that have an on-premise infrastructure can also use CodeDeploy. As you scale your own data center and servers, the service can also scale with you.

Android 11

Android 11 is the eleventh major release and 18th version of Android, the mobile operating system developed by the Open Handset Alliance led by Google. It was released on September 8, 2020 and is the latest Android version to date.

The first phone launched in Europe with Android 11 was the Vivo X51 5G and after its full stable release, the first phone in the world which came with Android 11 after Google Pixel was OnePlus 8T.

Android 11 introduces "conversations" notifications; they are designed for chat and messaging and can be presented in pop-up overlays known as "bubbles" when supported by apps. Bubbles is designed to replace the existing overlay permission, which is being deprecated in the future due to security (due to its use by clickjacking malware) and performance concerns.

The menu displayed when holding the power button now includes an area devoted to controlling smart home devices. Media controls are displayed as part of the quick settings area and no longer as a persistent notification. The screenshot button is moved to the recents screen (only on Pixel devices). Apps can be pinned on the share menu.

Android 11 includes a built-in screen recorder.

The voice control system is capable of recognizing screen context.

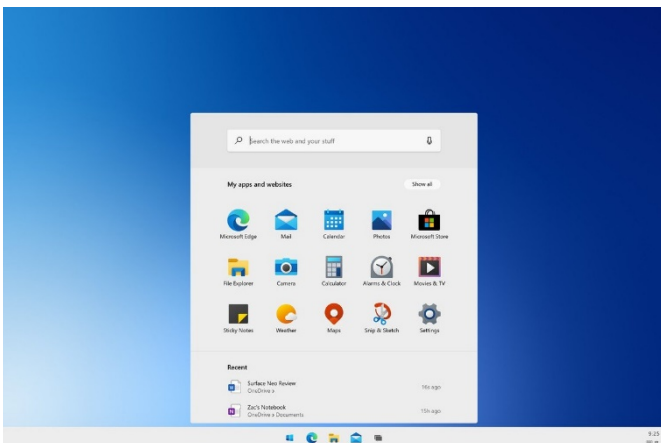


Windows 10X

Windows 10X, the simplified Windows variant Microsoft intended for dual-screen devices before the company unexpectedly pivoted last year, is now expected to ship by the second half of 2021. Microsoft reportedly wants to sign off on a shipping build by late spring.

Windows 10X is intended to be an OS for low-end hardware selling into embedded and educational markets. Windows Central reports the company delayed Windows 10X back from an intended launch last year to put an additional coat of polish on the operating system. Windows 10X is a stripped-down version of Windows 10. Win32 applications were originally supposed to be supported in Windows 10X via Microsoft VAIL (Virtualized Application Interface Layer), but this support was removed last year when Microsoft decided to drop support for high-end conceptual dual-screen devices (like Surface Neo) and refocus it as a competitor for low-end Chromebook hardware.

Windows 10X is an attempt to build a more limited version of Windows for a task-specific purpose. The UI and available OS features are radically simplified. There's reportedly no legacy File Explorer and the OS is designed to put web apps front and center, with Edge used as a front-end for running rich web applications. This is similar to how ChromeOS and Chromebooks currently work, and the pivot of Windows 10X to address the Chromebook market may have something to do with how those systems are eating Microsoft's market share.

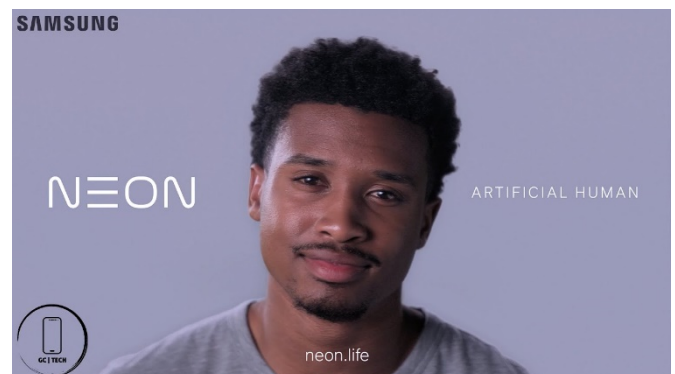


Samsung Digital Human

For the past few weeks, a Samsung subsidiary named STAR Labs has been teasing what it calls "Neon" — an "artificial human" that will be unveiled at CES 2020 next week.

But what exactly is Neon, and what is an artificial human? So far, we have very few official details, but most signs point toward the release of some sort of digital avatar technology: a realistic CGI human that users can interact with. It could be used for entertainment purposes or by businesses to create digital receptionists, customer service, and so on. Neon has a social media presence a mile wide and just a few GIFs deep. There are Twitter, Facebook, and Instagram accounts for Neon, all sharing the same vague and extremely futuristic-looking images. Posts pose questions like "Have you ever met an 'artificial'?" and tease technology called "Core R3," which stands for "reality, realtime, responsive." They also make clear that, whatever Neon is, it has nothing to do with Samsung's AI assistant Bixby.

The project is led by Pranav Mistry, a human-computer interaction researcher and former senior vice president at Samsung Electronics. According to his LinkedIn profile, Mistry is now CEO of STAR Labs (which stands for Samsung Technology & Advanced Research) and new company Neon. On his Twitter page, he's been stoking hype for the project, retweeting appreciative comments from people apparently given early previews. One describes Neon as "Artificial Intelligence that will make you wonder which one of you is real." Unofficial clues also point to digital avatar tech. US trademarks for "NEON Artificial Human," "NEON.Life," and "Core R3" have been registered by Samsung Research America (and spotted by LetsGoDigital).



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