Be open …
be impatient …
be hopeful:
Sundar Pichai

Sundar as a Stanford graduate student

Hello, everyone. And congratulations to the Class of 2020, as well as your parents, your teachers, and everyone who helped you get to this day.

I never imagined I'd be giving a commencement speech with no live audience … from my backyard. But it's giving me a much deeper understanding for what our YouTube Creators go through! And I certainly never thought I'd be sharing a virtual stage with a former President … a First Lady, a Lady Gaga, and a Queen Bey … not to mention BTS.

I don't think this is the graduation ceremony any of you imagined. At a time when you should be celebrating all the knowledge you've gained, you may be grieving what you've lost: the moves you planned, the jobs you earned, and the experiences you were looking forward to. In bleak moments like these, it can be difficult to find hope.

So let me skip right to the end and tell you what happens: you will prevail.

That's not really the end of the speech, so don't get too excited.

The reason I know you'll prevail is because so many others have done it before you. One hundred years ago, the class of 1920 graduated into the end of a deadly pandemic. Fifty years ago, the class of 1970 graduated in the midst of the Vietnam War. And nearly 20 years ago, the class of 2001 graduated just months before 9/11.

There are notable examples like this. They had to overcome new challenges, and in all cases they prevailed. The long arc of history tells us we have every reason to be hopeful.

So, be hopeful.

There's an interesting trend I've noticed: It's very conventional for every generation to underestimate the potential of the following one.

It's because they don't realize that the progress of one generation becomes the foundational premise for the next. And it takes a new set of people to come along and realize all the possibilities.

I grew up without much access to technology. We didn't get our first telephone til I was 10. I didn't have regular access to a computer until I came to America for graduate school. And our television, when we finally got one, only had one channel.

So imagine how awestruck I am today to be speaking to you on a platform that has millions of channels.

By contrast, you grew up with computers of all shapes and sizes. The ability to ask a computer anything, anywhere—the very thing I've spent my last decade working on—is not amazing to you. That's OK, it doesn't make me feel bad, it makes me hopeful!

There are probably things about technology that frustrate you and make you impatient.

Don't lose that impatience. It will create the next technology revolution and enable you to build things my generation could never dream of.

You may be just as frustrated by my generation's approach to climate change, or education. Be impatient. It will create the progress the world needs.

You will make the world better in your own ways. Even if you don't know exactly how. The important thing is to be open-minded so you can find what you love.

For me, it was technology. The more access my family had to technology, the better our lives got. So when I graduated, I knew I wanted to do something to bring technology to as many others as possible.

At the time, I thought I could achieve this by helping build better semiconductors. I mean, what could be more exciting than that?

My father spent the equivalent of a year's salary on my plane ticket to the U.S. so I could attend Stanford. It was my first time ever on a plane. But when I eventually landed in California, things weren't as I had imagined. America was expensive. A phone call back home was more than $2 a minute, and a backpack cost the same as my dad's monthly salary in India.

And for all the talk about the warm California beaches … that water was freezing cold!

On top of all that, I missed my family, my friends, and my girlfriend—now my wife—back in India.

A bright spot for me during this time was computing. For the first time in my life, I could use a computer whenever I wanted to. It completely blew my mind.

And at that same moment, the internet was literally being built all around me. The year I arrived at Stanford was the same year the browser Mosaic was released, which would popularize the world wide web and the internet.

The summer I left was the same summer that a graduate student named Sergey Brin met a prospective engineering student named Larry Page. These two moments would profoundly shape the rest of my life. But at the time, I didn't know it.

It took me a while to realize that the internet would be the single best way to make technology accessible to more people. As soon as I did, I changed course and decided to pursue my dreams at Google.

Inspired by the wonder that first browser created in me, I led the effort to launch one—called Chrome—in 2009, and drove the effort to help Google develop affordable laptops and phones so that a student growing up, in any neighborhood or village, in any part of the world, could have the same access to information as all of you.

Primary school students in the city of Dolores Hidalgo in Mexico

Had I stayed the course in graduate school, I'd probably have a Ph.D. today—which would have made my parents really proud. But I might have missed the opportunity to bring the benefits of technology to so many others.

And I certainly wouldn't be standing here speaking to you as Google's CEO. Believe me when I say I saw none of this coming when I first touched down in the state of California 27 years ago.

The only thing that got me from here to there—other than luck—was a deep passion for technology, and an open mind.

So take the time to find the thing that excites you more than anything else in the world. Not the thing your parents want you to do. Or the thing that all your friends are doing. Or that society expects of you.

I know you're getting a lot of advice today. So let me leave you with mine:

Be open … be impatient … be hopeful.

If you can do that, history will remember the Class of 2020 not for what you lost, but for what you changed.

You have the chance to change everything. I am optimistic you will.

Business Confidence in IT Spending Declines Despite Moves to Ease Economic Lockdown

IT buyers in the US, Western Europe, and some parts of Asia/Pacific indicated that they now expect total IT spending to decline by more than previously anticipated. This is in spite of a general stabilization in other market indicators over the past month, as many countries prepare to tentatively move into a gradual recovery phase. Confidence levels are still especially weak in the USA, where they have continued to trend down since the crisis began. US firms are a little more confident about the overall economy than two weeks ago, but conversely less confident about their own IT budgets for the year as a whole. Significant spending declines are predicted for traditional technologies including PCs, peripherals, software applications, and project-oriented IT services. Survey results also deteriorated in Europe, especially in France, Italy, and Russia.

"The survey results have diverged with businesses in most countries now expressing less confidence about their own spending than about the broader economy," said Stephen Minton, vice president with IDC's "This could just reflect the fact that we're still in the middle of the second quarter when the biggest spending cuts are likely to be concentrated and the scale of the short-term impact has been even worse than some

firms expected. In fact, survey results are now closer in line with market indicators in terms of the scale of IT spending decline projected for 2020 as a whole."

The COVID-19 Tech Index uses a scale of 1000 to provide a directional indicator of changes in the outlook for IT spending and is updated every two weeks. The index is based partly on a global survey of enterprise IT buyers, and partly on a composite of market indicators which are calibrated with country-level analyst inputs relating to medical infection rates, social distancing, travel restrictions, public life, and government stimulus. A score above 1000 indicates that IT spending is expected to increase, while a score below 1000 points towards a likely decline.

Business confidence had been improving steadily in Asia/Pacific, but the picture is more complex according to the latest poll. IT spending is still projected to increase in China, where the economy has moved more quickly from a containment to recovery mode, but confidence levels plunged in India and even declined in Korea where moves to ease lockdown measures appeared to trigger some instances of infections increasing again.

"The recovery phase in the second half of the year will be unpredictable and there may be volatility in survey results as businesses react to anxiety around a possible second wave of infections," said Minton. "The first phase of this crisis was uniformly bad for everyone, but the next chapter will be very localized and dependent on a delicate balance of medical and economic factors. Not surprisingly, the latest survey results support a sense that IT buyers remain cautious in this type of economic climate and continue to be vigilant in the near term. Moreover, we have now entered

a phase where some companies are being forced into bankruptcy or employee reductions, which will have inevitable implications for tech spending in the second half of the year."

The IDC COVID-19 Tech Index is a leading indicator for IT Spending, which is designed to provide rapid updates to changes in buyer sentiment and underlying market indicators before these are factored into official market and macroeconomic forecasts. The index is based on a scale whereby a score higher than 1000 indicates growth in IT spending, while a score below 1000 indicates a decline.

The index is based on surveys of enterprise IT buyers around the world, who are asked to provide guidance on a variety of factors including general business confidence, overall IT spending plans and specific changes to budget allocations for individual technologies. Additionally, the index score is weighted with a composite of 'market indicators' which includes macroeconomic forecasts calibrated with inputs relating to medical data, social isolation measures and the impact of government stimulus.

India emerging as the second-largest manufacturer of mobile phones in the world

In the launch of the 'Electronics Manufacturing Schemes' in New Delhi, Union Minister Ravi Shankar Prasad said that the country is emerging as the "second-largest manufacturer of mobile

phones" in the world and also said that "the production of mobile phones has gone up to approx 33 crore in 2019-2020."

"From just 2 production factories, today we have more than 200 manufacturing units. India's electronic manufacturing was worth Rs 1,90,366 crore in 2014, today it's Rs 4,58,000 crore. India's global share in electronics has risen from 1.3% in 2012 to 3 per cent in 2018. Electronic production has surpassed exports," he said. He also said that the Centre is working towards constructing a "robust" manufacturing ecosystem in the country.

"PM Narendra Modi has given a clarion call for Aatma Nirbhar Bharat (a self-reliant India). In view of that, the government is working towards

to build up a robust manufacturing ecosystem in India."

"There is a higher leverage given to hardware manufacturing in India in the past few years, which has emerged as an important pillar of the Make In India and Digital India initiatives. Self-reliant India is not an India of isolation and its not an inward-looking India. It is an India which develops an ecosystem as a robust asset to the global economy," he added.

"The National Policy on Electronics 2019 aims to position India as a global hub for Electronics System Design and Manufacturing (ESDM) by encouraging the country to develop core components, enabling the industry to compete globally," he further said.
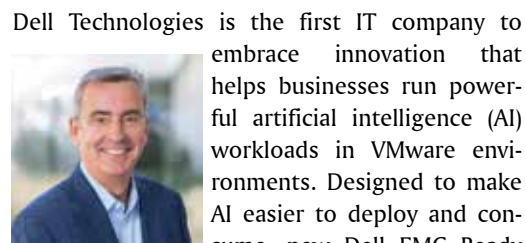

Infosys and Celonis Collaborate to Transform ERP Modernization and Business Process Optimization Worldwide

Infosys, the global leader in next-generation digital services and consulting, announced their global partnership with Celonis, a market leader in AI-enhanced process mining and process excellence software, to transform ERP modernization and business process optimization. This new partnership will enable customers to embark on long term transformation projects with significant operational savings, overcoming challenges typically associated with crowded technology landscapes, blends of legacy and homegrown systems, and operational silos that threaten digital transformation agendas.

Together, Infosys and Celonis will enable enterprise customers to meet their digital needs by helping them to scale the adoption of SAP S/4HANA and SaaS platforms. Leveraging Celonis' unique capabilities, Infosys will drive business excellence and improve productivity through automation and building cutting-edge technology platforms.

AP Government Collaborates With IBM To Provide Responses To COVID-19 Questions

The National Health Mission, under the Government of Andhra Pradesh, and IBM announced that a virtual agent that provides COVID-19-related information for citizens on the response efforts and measures by the Andhra Pradesh Government has been launched at the Andhra Pradesh National Health Mission portal of Department of Health, Medical and Family Welfare – **http://covid19.** **ap.gov.in/covid19/** – a website under the auspices of the Andhra Pradesh Government.

The Watson virtual agent (called Watson Assistant for Citizens) on the IBM public cloud brings together Watson Assistant, Natural Language Processing capabilities from IBM Research, and state-of-art enterprise AI search capabilities with Watson Discovery, to understand and respond to common questions about COVID-19 in English, Telugu and Hindi.

COVID-19 crisis has driven higher demand for face-to-face interactions and collaboration using Zoom

Zoom Video Communications, Inc., a provider of video-first unified communications, announced financial results for the quarter ended April 30, 2020.

"We were humbled by the accelerated adoption of the Zoom platform around the globe in Q1. The COVID-19 crisis has driven higher demand for distributed, face-to-face interactions and collaboration using Zoom. Use cases have grown rapidly as people integrated Zoom into their work, learning, and personal lives," said Eric S. Yuan, Founder and Chief Executive Officer of Zoom. "I am proud of our Zoom employees who dedicated themselves to support customers and the global community during this crisis. With their tremendous efforts, we were able to provide high-quality video services to new and existing customers.

Yuan added, "We also supported an unprecedented number of free participants, including over 100,000 K-12 schools around the globe that chose Zoom to deliver the best online education experience. This quarter, we were also proud to launch Zoom Cares, our corporate philanthropic entity, with initial grants to San Jose Digital Inclusion Fund, Destination Home, the CDC Foundation, the World Health Organization and the CDE Foundation. While the key long-term focuses of this foundation are education, climate change, and social equity, our primary grants in Q1 were toward organizations making a difference during COVID-19."

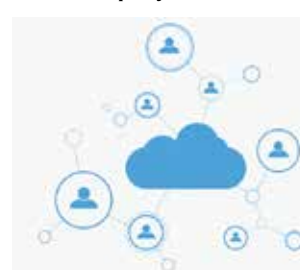# RP tech India Unveils Learn from Home (LFH) Solutions Portfolio

The COVID -19 pandemic and nationwide lockdown have changed the landscape of the education sector in India. As the Government continues to restrict social gatherings, E-Learning is emerging as the new education system in the country. Acknowledging the demand for IT infrastructure for virtual learning, RP tech India, country's only value-added distributor has unveiled Learn from Home (LFH) solutions portfolio.

Designed to provide seamless connectivity and hassle-free computing experience to students and professionals, the cutting edge technology solutions takes self-education to the new level.

Dell Technologies Shifts AI Adoption into the Fast Lane with Simplified Advanced Computing

Dell Technologies is the first IT company to embrace innovation that helps businesses run powerful artificial intelligence (AI) workloads in VMware environments. Designed to make AI easier to deploy and consume, new Dell EMC Ready Solutions based on VMware Cloud Foundation help companies gain AI insights with the combination of Dell EMC systems and new features of VMware vSphere 7, including Bitfusion.

"Artificial intelligence is a game changer, but our customers tell us they're lagging behind in adoption because they're dealing with skills and infrastructure gaps," said Tom Burns, senior vice president, Integrated Products & Solutions, Dell Technologies. "We're bringing together the power of Dell Technologies to help customers simplify the process of running AI workloads at scale in their familiar VMware environments."

Two new Dell EMC Ready Solutions—backed by global services and delivered through Dell Technologies On Demand flexible consumption—help companies get systems into production quickly and economically. With close IT integration, Dell Technologies is innovating to help customers speed AI adoption, so they can meet business pressures to digitally transform faster.

Wipro and IBM collaborate to help clients accelerate their cloud journeys

Wipro Limited, a leading global information technology, consulting and business process services company, announced a collaboration with IBM to assist Wipro customers embark on a seamless and secure hybrid cloud journey. Through this alliance Wipro will develop hybrid cloud offerings to help businesses migrate, manage and transform mission-critical workloads and applications, with security across public or private cloud and on-premises IT environments. Wipro IBM Novus Lounge, located at Wipro's Kodathi campus in Bengaluru is a dedicated innovation center. It will offer a comprehensive suite of solutions leveraging Cloud, Artificial Intelligence, Machine Learning and Internet of Things capabilities to foster innovation for enterprises, developers and start-ups. Customers will have remote access to IBM and Red Hat solutions, designed to help them scale their technology investments for improved experience and business agility with connected insights. Additionally, Wipro will leverage IBM Cloud offerings and technologies alongside in-house services to develop industry solutions for clients in Banking and Financial Services, Energy and Utilities, Retail, Manufacturing and Healthcare space.

Experience the Next Level of Mobile Computing with Galaxy Book S

Samsung Electronics announced the availability of Galaxy Book S with Intel processor, the latest addition to its leading computing device family. To ensure consumers have access to a wide range of computing devices to best fit their lifestyle, Samsung introduces the Galaxy Book S powered by the new dynamic Intel® Core™ processor with Intel® Hybrid Technology. Galaxy Book S joins other previously announced premium mobile laptops, designed to offer a seamless and connected experience across devices. Galaxy Book S is built for the next generation of users who are looking for a computing device that provides outstanding productivity, wide-ranging connectivity, enhanced mobility and expansive continuity across devices and operating systems to help them get more done in less time.

"The way we work has shifted and it's important we have computing devices that can adapt to this new working style. Users utilize multiple devices throughout their day to accomplish tasks, and demand that those devices provide them with enough flexibility to remain on the move and available," said Woncheol Chai, SVP and Head of Product Planning Team, Mobile Communications Business, Samsung Electronics. "With our new computing devices like the Galaxy Book S, we are providing users with an exciting opportunity to be productive, efficient and connected."

Dell Technologies brings the World's Most Intelligent 15" Business PC with built-in AI to India

Dell Technologies in India has announced the availability of its premium commercial PC – the Latitude 9510, the world's most intelligent and secure business PC. Earlier this year at CES 2020, Dell introduced the ultra-premium 9000 Latitude series, designed with the finest details in mind to be smaller and thinner than ever before, with a larger display and a superior experience. The new Latitude 9510 delivers on what enterprise users seek- the longest battery life of any 15-inch business PC with a target of up to 34 hours, 5G-ready design, powerful audio features, and intelligent solutions that increase productivity.

The devices we rely on are getting smarter with intelligence and computing power that can help make informed decisions which lead to tangible business outcomes. Dell understands that technology choices are key to making modern workers more effective and businesses competitive. With Latitude 9510, Dell has embarked on creating a truly future-ready PC in the commercial laptop segment.

It offers the power and performance teams need to be productive anywhere as the first Project Athena-verified commercial PC with 10th Gen Intel® vPro® processors.The Latitude 9510 sports a machined-aluminum finish with diamond-cut edges for professionals looking for the right combination of performance and style. The Intel® Wi-Fi 6 (Gig+) and 5G-ready mobile broadband capabilities allow executives to be more productive wherever they need. The design incorporates 5G antennas into the speakers to retain the stunning 15" InfinityEdge display in a 14" form factor, while its carbon blade fans and dual heat pipes offer a quiet and cool-to-the-touch experience. The Latitude 9510 is available in 2 variants, 2-in-1 convertible as well as a clamshell laptop, for wherever employees work.

Acer India expands another winner in the gaming portfolio with Aspire 7 Gaming laptop

Acer India, the global PC brand, announced the expansion of its gaming portfolio in India with the launch of powerful Aspire 7 gaming laptop on Flipkart that comes in 4 new variants to cater to gamer's demand. Acer's new Aspire 7 gaming laptop hides a powerful processor and graphics which will help gamers get the most of the 15.6" screen with a large screen-to-body ratio and weigh only 2.15 Kg, fairly lightweight for a gaming PC. The laptop can be equipped with up to 9th-gen Intel Core i7 processor or AMD Ryzen™ 3000 along with latest NVIDIA graphics to keep everything running at its optimum speed. Enabling smooth multi-tasking and productivity, it has the latest USB- C connectivity, TrueHarmony™ audio technology, and Multi User – Multi Input Multi Output (MU-MIMO) which handle multiple wireless devices at once with faster speeds and is 2x faster than single-user MIMO.

Acer continues to innovate and bring great gaming experiences to the Indian market for consumers when it comes to laptop design, and the new Aspire 7 is yet another device exclusively designed to meet the needs of the casual gamers who value the subtle design as much as the performance. Aspire 7 is a svelte gaming machine that delivers a solid combination of power coupled with restrained aggressiveness from the outside. The new Acer Aspire 7 is aimed at casual gamers who want a take-anywhere laptop. The latest processors will deliver a complete platform with the performance to empower rich user experiences and the power efficiency to extend battery life. Acer is facilitating gamers with cutting-edge technology that is proven and reliable, considerably improving the experience. In fact, Acer has reportedly retained its spot of being the "No.1 Gaming PC Brand" in India for two consecutive years (2018 – 19) as per the leading research firm (Source: IDC Gaming Tracker, based on Branded Gaming

India's first laptop with AMD Ryzen™ 4000 Series Mobile Processor

Acer India, the global PC brand, announced the latest addition to its thin and light notebook series with the arrival of new Acer Swift 3, which is now available up to AMD Ryzen™ 5 4500U Processor with Radeon™ Graphics. Acer Swift 3 is India's first AMD Ryzen™ 4000 series mobile processor-powered laptop in the market for mobile computing needs.

Acer continues to push the envelope when it comes to minimalist design aesthetic and the new thin and light Acer Swift 3 is yet another compelling option for people who value the artistic appeal as much as the performance of their device. It sports narrow-bezel display, offering 82.73 percent screen-to-body ratio with a 14-inch Full HD IPS display and packs a lot of power into its 15.95 mm thin chassis with weighs just 1.2 kg light. It also includes up to 1 TB PCIe Gen 3 8 Gb/s up to 4 lanes, NVMe storage and 16 GB LPDDR4X RAM. The dual-band Intel Wi-Fi 6 offers a strong, fat and more enjoyable wireless experience, making it an ultra-portable, supercharged laptop for work and play. It delivers up to 11 hours of battery life and offers fast charging capabilities; 30 minutes charging can provide approximately 4 hours of battery life in video playback

Your Digital Future Looks Brighter with Lenovo™ Detachable and Smart Home Devices

Remember when devices were designed to only do one thing, in one place, and for a single user? Not anymore. Our world is changing fast; with smarter technology more prevalent than ever in our daily lives, multitasking has increasingly become the norm. With grab-and-go form factors, our screens are our lifelines when we're on-the-go or just moving from room to room in our own homes. As we are finding out, remote working, online learning, and virtual social gatherings do not have to be hosted from any particular place—all it takes is the right technology. In this time of connectivity, Lenovo is committed to delivering on all fronts by providing more people with the accessible and multipurpose technology they will need to thrive. Designed to help us all navigate a fully connected world, Lenovo propels its latest consumer lineup forward by introducing two LTE-supported, Windows 10 detachables including the portable Lenovo Yoga Duet 7i1 with its imaginative Lenovo E-Color Pen and the Lenovo IdeaPad™ Duet 3i1 with digital pen, making it a clear winner with students and multitaskers alike. Another way to enjoy versatility and personal connection at home is with the upgraded Lenovo Smart Tab M10 FHD Plus (2nd Gen) with Alexa Built-in™, which enables the popular hands-free 'Show Mode' experience from Alexa® when docked and charging in its Smart Dock, with the added benefit of being a full-function Android™ tablet for when you don't feel like staying put in one room. Experience what's next in performance and portability with the new Lenovo consumer devices coming to market.

OECHSLER and HP Partner to Scale 3D Printing Applications for Industry Leaders

OECHSLER, an engineering solutions provider and one of the largest parts manufacturers in the additive industry, and HP, the leader in industrial 3D printing solutions, announced a new alliance to help accelerate the mass production of 3D printed parts. The companies are working together across the product lifecycle, from new designs to final parts production, to develop breakthrough applications for customers in indus-

tries such as automotive, home and commercial appliances, and medical devices.

"As we continue driving the mass production of 3D printed parts we believe working with an industry leader like HP will enable our customers to take full advantage of digital manufacturing," said Matthias Weißkopf, senior vice president of research and development, Oechsler AG. "With the advanced capabilities of HP's production-grade 3D printing systems we can provide unprecedented levels of quality, speed, reliability, and cost savings. The opportunity to collaborate closely on every phase of the product lifecycle and jointly develop breakthrough applications with HP and our customers will transform industries."

Qualcomm Introduces the World's Most Advanced Mobile Wireless Connectivity Portfolio

Qualcomm Technologies, Inc., a subsidiary of Qualcomm Incorporated, launches a flagship portfolio of mobile connectivity systems that represent the most advanced Wi-Fi 6E offerings of their kind. Building upon our leading Wi-Fi 6 and Bluetooth audio technology features, the Qualcomm® FastConnect™ 6900 and Qualcomm® FastConnect™ 6700 mobile connectivity systems feature the fastest available Wi-Fi speeds in the industry (up to 3.6 Gbps) on a mobile Wi-Fi offer-

ing, VR-class low latency and Bluetooth advancements delivering immersive audio experiences for classic and emerging LE Audio use cases.

"With the introduction of the FastConnect 6900 and 6700 solutions, Qualcomm Technologies is redefining the mobile experience by extending the power of Wi-Fi 6 into the 6 GHz band and advancing wireless audio with cutting-edge integrated Bluetooth 5.2 features," said Dino Bekis, vice president and general manager, mobile and compute connectivity, Qualcomm Technologies, Inc. "These innovations enable us to further break away from the pack and deliver a connectivity portfolio optimized to accelerate global adoption across multiple smartphone tiers."

HP, Valve, and Microsoft Removing Distance Barriers with NextGen Virtual Reality Headset

HP Inc. unveiled its latest virtual reality (VR) headset, the HP Reverb G2, in collaboration with industry leaders Valve and Microsoft. The HP Reverb G2 is the world's highest resolution VR headset among major vendors, delivering cut-

ting-edge optics, inside-out tracking, spatial 3D audio, natural gestures, long-wearing comfort, and plug and play support for Windows Mixed Reality and SteamVR.

"The power of collaboration is on full display with the HP Reverb G2, and alongside Valve and Microsoft, we engineered a no-compromises VR headset that's immersive, comfortable, and compatible across Windows Mixed Reality and SteamVR," said Spike Huang, Vice President and Global Lead of VR, HP Inc. "The time is now for VR and the HP Reverb G2 brings high-quality VR to the masses with more immersion for gamers, interactive experiences for creators, increased engagement for collaboration, and higher retention rates for education and training."

AMD EPYC™ Processors Ecosystem Continues to Grow with Integration into New NVIDIA DGX A100
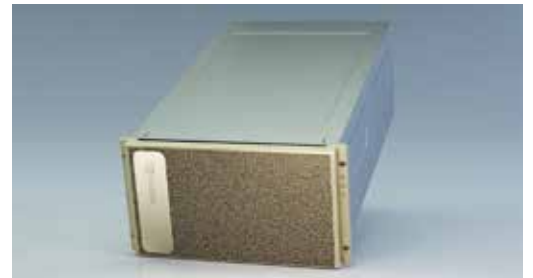
AMD announced the NVIDIA DGX™ A100, the third generation of the world's most advanced AI system, is the latest high-performance computing system featuring 2nd Gen AMD EPYC™ processors. Delivering 5 petaflops of AI performance, the elastic architecture of the NVIDIA DGX A100 enables enterprises to accelerate diverse AI workloads such as data analytics, training, and inference.

NVIDIA DGX A100 leverages the high-performance capabilities, 128 cores, DDR4-3200MHz and PCIe® 4 support from two AMD EPYC 7742 processors running at speeds up to 3.4 GHz1. The 2nd Gen AMD EPYC processor is the first and only current x86-architecture server processor that supports PCIe® 4, providing leadership high-bandwidth I/O that's critical for high performance computing and connections between the CPU and other devices like GPUs.

NETGEAR's Orbi RBK20 Mesh Router Ensures Wi-Fi Speed and Reliability in your Home Office

As the pandemic continues, it has become critically essential to have a good Wi-Fi connection to boost your productivity while working from home or even if you're looking for something to just spend your time glued to the Internet, etc. It is crucial to have a sturdy Wi-Fi router that can strengthen the Wi-Fi signal across the house or any space you need to keep connected. To overcome the networking challenges NETGEAR offers its Orbi Mesh Range to cover a large space with consistent Wi-Fi signals while removing the dead spots within the house.

The NETGEAR Orbi RBK20 Wi-Fi Router delivers exceptional Wi-Fi coverage while removing the dead spots, unreliable connections, and slow speed issues. It covers homes up to 4,000 square feet with strong Wi-Fi signals and the Innovative Tri-band Wi-Fi also helps in maximizing the Internet speeds available in your home.

vivo Unveils Y50 smartphone with iView Display in India

vivo, the innovative global smartphone brand, launched the all-new Y50 in India. The latest addition in the youthful Y-series portfolio is equipped with 8GB RAM + 128GB ROM and is powered by Qualcomm® Snapdragon™ 665 Mobile Platform processor.

Priced at INR 17,990, the device will be available for purchase on vivo India E-store, Amazon, Flipkart, Paytm, Tata CLiQ, and across all partner retail stores.

The Y50 comes with a 16.59cm (6.53) iView display and offers a 90.7% screen to body ratio and packs a massive 5,000mAh battery for seamless smartphone experience.

The Super Wide-Angle Quad Camera provides enhanced picture capabilities with a 13MP main camera, 8MP super-wide-angle camera, 2MP Bokeh camera and 2MP Macro camera. At the front, the smartphone features 16MP camera for great selfie experience. The super night feature in Y50 can capture brighter and breathtaking images, even in the dark light.

OPPO disrupts entry level segment, launches A12 in India

OPPO, a global smart device brand, is geared up to expand its popular A series with the launch of A12 in India. This power-packed entry-level smartphone is a testimony of OPPO's vision to provide exciting features at a compelling price to enhance the overall smartphone experience and style quotient of consumers.

Available in a mighty combination of 4GB RAM + 64GB ROM and 3GB RAM + 32GB ROM with memory expandable up to 256GB. OPPO A12 is powered by a 4230mAh battery that provides extended hours of content consumption for the users.

The device is equipped with a 13MP+2MP AI dual rear camera capable of capturing clearer and sharper images. The smartphone is equipped with a host of amazing features such as Rear Fingerprint Sensor and Face Unlock giving a secure smartphone experience whereas Dirac Smart sound effects provide the best sound effect while gaming, listening to music, and video streaming.

Two New M Series Smartphones in Sub INR 15K Segment in India

Samsung, India's most trusted smartphone brand, launched two new smartphones under its widely popular Galaxy M series. The new Galaxy M11 and Galaxy M01 smartphones are being launched in the sub INR 15000 price segment, which makes the largest pie of smartphone sales in India. These two smartphones come with the promise of trust and quality of Samsung at attractive prices.

The new Galaxy M11 sports a distinctive Infinity-O display, which gives the smartphone a standout style along with top of the line specs in this segment, making it flaunt worthy and performance oriented.

"Galaxy M series smartphones have carved a unique place in the minds and hearts of Indian consumers in a very short span of time. With the launch of Galaxy M11 and Galaxy M01, we are delighted to take the legacy forward to the next level. The new proposition offers unprecedented style and experience to our aspirational Gen Z and millennial consumers, while delivering the best of everything in their device," said Aditya Babbar, Director, Mobile Business, Samsung India.

Motorola razr with Android™ 10: Fully Closed. Fully Capable

Motorola razr's innovative hardware ushered a new era of smartphones on the forefront of the foldable revolution. But hardware isn't the only area of focus – we know software can bring unlimited benefits to this new form factor, too. That's why we created a state-of-the-art software experience with our totally unique Quick View display, enabling a new way of interacting with your phone.

Razr owners love razr's utility, versatility, and ability to keep them in the loop without pulling them away. Razr's upgrade to Android™ 10 provides a streamlined new look and feel while significantly improving and expanding the Quick View display functionality, providing an unparalleled foldable experience built on consumer feedback.

POCO F2 PRO: The ultimate flagship killer

POCO, the beloved smartphone product brand launched its latest device: POCO F2 Pro. Tailored to tech enthusiasts, the device prioritizes performance over frills – without the traditional flagship price tag.

With the Snapdragon™ 865 Mobile Platform under the hood, POCO F2 Pro offers sustained peak performance, extremely fast processing speeds, and a true full-screen viewing experience that'll have techies waving goodbye to their current daily driver.

POCO F2 Pro takes the mobile experience to the next level with Qualcomm® Snapdragon™ 865: the most powerful 5G processor on the market. Paired with a Kryo™ 585 octa-core chip processor and Adreno™ 650 GPU, both offer 25% improved performance over their predecessor, delivering the ultimate performance with constantly connected users in mind. The powerful SoC is complimented with ultra high-speed LPDDR51 RAM and the latest UFS 3.1 storage, which enable POCO F2 Pro to offer top-notch read-and-write capabilities for insanely smooth operations.

Era Of New Elegance Starts With LG Velvet

LG VELVET's new design, characterized by flowing lines, curved corners and symmetrical front and rear edges are all implementations of the new 3D Arc Design language. Smooth, polished surfaces, shimmering colors and elegant touches such as the "Raindrop" camera that evokes imagery of falling rain set LG VELVET apart from its peers. This new, nature-inspired design language makes LG VELVET visually striking and comfortable to hold.

Key to the design is LG VELVET's thin 7.9 millimeter profile, only made possible with its 6.8-inch P-OLED Cinematic FullVision display and Qualcomm Snapdragon 765G, the first mobile platform from the company to integrate an application processor and 5G modem for superb performance in a smaller package that requires less power. Compatible with the enhanced LG Dual Screen (sold separately), both the VELVET and Dual Screen displays work with compatible active stylus pens.

AgRobotics: What is possible and where India stands: CII

Robots. What is the image that comes to our minds when we first think of this word? For most of us born in the final decades of the 20th century, the visual representation is either of gun totting terminators rampaging through our cities, or little scavengers left on a degrading earth by space bound humans.

Very few of us are aware that these pinnacles of human ingenuity and engineering can be used in a sector as traditional as agriculture. There are examples of robots; both miniature and large, being deployed for a plethora of activities involved across the farming process. The range of functions performed by these machines are governed by the farm terrain, product type, and the need that automation can fulfill.

Some of the most interesting examples can be seen in farms around Netherlands where the scientists are using a combination of Artificial Intelligence and Data Analytics to equip robots with the ability to differentiate between ripened, semi-ripened, and un-ripened fruits & vegetables. Depending upon the algorithm programmed into it, a robot can pick fruits & vegetables only in a selected stage of ripening and can also differentiate between varying characteristics. One such example is the 'Sweeper', which can pick ripened bell-peppers in a matter of seconds and can work continuously for 24 hours unlike its human counterparts. This has helped the farmers optimize their harvest and realize better prices for the goods.

Across the Atlantic, on the west coast of United States, another robot is using specialized sensors, cameras, and machine learning tools equipped to suck the fruit right off the branch through a vacuum arm. The fruit is transported and stored without any human involvement, which in addition to being faster and precise, also avoids any risk of contamination. Such robots are important for a state like Washington that produces 58% of total apples in the US and constantly faces shortage of skilled horticultural labour.

Similar research in Israel has enabled precise application of pesticides to only the affected region of a plant; spread nutrient solution to a distressed piece of the farm; and even spray inputs through an unmanned aerial vehicle covering much larger tracts of lands than possible on foot by human workers. Some of these drones can carry a payload as large as 500 kilograms and can cover several hundred acres of farmland in a day, a task that their human counterparts would accomplish in almost a week. Such interventions have resulted in higher efficiencies of inputs used, checked the unsystematic application of chemical inputs, in turn improving the soil quality.

While several data oriented digital solutions have made their way to the farms at home in India, the adoption of robotics & automation-oriented solutions remains at a nascent stage. There exists technology for targeted harvesting of a sensitive crop such as cotton, or a self-driven land preparer-leveler, but the challenge remains in commercialization of such transformative solutions. The reasons for these are several, ranging from unevenness in the geographical conditions, to lack of ecosystem support for such innovations. Despite the challenges, there exists an unquestioned need for use of Robots Indian Agriculture. Some of these intuitive machines have had the sun shine on them, quite literally, but the adoption remains comparatively lower than their digital counterparts. The developed solutions are primarily concentrated in the On-Farm segment of the Agricultural Value Chain while limited innovation is seen in the Harvesting segment. Established industries have seen higher success rates in commercializing a concept and producing a market ready prototype such as the driverless tractor.

The need of the hour is a multi-stakeholder initiative to draw up a roadmap for speedier deployment of robots throughout the agricultural sector in India. The Agri-Robotics Masterclass by CII's Food and Agriculture Centre of Excellence is one such initiative. It is attempting to set a precedent by bringing together the brightest experts from across the world to share their insights with the discerning Indian audience that has proven its tech-savviness across the global corridors and shown an enthusiastic appetite for path breaking innovations.

Empower modern workplaces to print remotely but also to seamlessly digitize documents and streamline the workflow

The Covid-19 crisis has emerged as the black swan event of the 21st century, leaving the work cultures across organisations the world over in a shambles. Against this backdrop, new-age professionals are using the digital ecosystem to bypass the geographical constraints of the lockdown as they scramble to meet their daily deliverables from the safe confines of their homes. It is here that Konica Minolta's innovative range of digital Multifunctional printers under the New bizhub i Series enters the picture to provide quarantined professionals with smarter and safer office printing and workflow management solutions.

The New bizhub i Series comprises multi-functional printers in the colour and monochrome categories. The former range includes bizhub C250i, bizhub C300i, bizhub C360i, and bizhub C450i colour printers. On the other hand, bizhub 226i, bizhub 266i, bizhub 306i, bizhub 225i & bizhub 205i constitute the monochrome line up. These solutions not only empower modern workplaces to print remotely but also to seamlessly digitize documents and streamline the workflow. In this way, the KM range of digital MFPs can lend a competitive edge to organizations over their peers by enabling them to maintain business continuity in keeping with the social distancing protocols. The following some of the key features enabled by the KM products:

Mobile printing

As the normalization of disease-curbing social distancing codes has demonstrated, the minimisation of one's physical contact environment will continue to be the priority for individuals across the globe. In the face of this transformative effect of the pandemic across the global business ecosystem, KM solutions reduce contact with common touchpoints such as computer screens that can act like potential Covid-19 vectors. Instead, MFPs under the New bizhub i Series enable individuals to conduct printing operations remotely using their personal mobile devices.

Banner print function

Besides enforcing the social distancing-compliant precautionary measures at the workplace, organisations also need to actively spread awareness to tackle Covid-19. Banners comprise one of the effective awareness-building tools that can be employed at offices now that the work is resuming slowly. Once the economic ball starts rolling again and business functions across sectors regain their momentum, offices will be required to issue circulars, notices for precautions, advisory, etc. for not just the workforce but visitors as well. And KM MFPs are well-equipped to meet this demand.

IC card authentication

In sync with the idea of minimising the physical contact environment, the biometric-based systems will now be replaced by contactless alternatives. The use of IC card authentication (employee ID card) feature comprises one such solution to the problem at hand. The MFPs under New bizhub i Series come equipped with this feature. All a user needs to do is, wave their ID card over a card reader on the machine to print, thereby forgoing the need to touch the MFP Screen.

Besides being compatible with social distancing codes, the IC card authentication also facilitates robust cybersecurity measure in an increasingly sophisticated threat landscape. Since only the authorized users can print or scan using IC card authentication, this feature ensures sensitive documents and business-critical information do not fall into the wrong hands.

In this manner, Konica Minolta underlines its commitment to providing a smart, safe, and secure digital printing experience to new-age offices across India. At the same time, the innovative solutions under the New bizhub i Series further consolidate the company's position as a domain leader in the country's office printing landscape.

These are exciting times in India with fantastic entrepreneurs pursuing global opportunities

Abhi Kumar
Director, India Lead
of M12, Microsoft's
venture fund

"You don't have to be at a customer's doorstep or be in Silicon Valley to disrupt an industry or function. There are entrepreneurs and teams all across India, in both small and large towns, that are innovating daily and changing the way enterprises operate around the globe – from Tokyo to New York," says Abhi Kumar, director, India Lead of M12, Microsoft's venture fund.

M12 has invested in India-based startups, like Innovacer and FarEye, and has now launched its physical presence in India at Microsoft's Bengaluru office. We caught up with Kumar in a candid chat on his vision for M12 in India, the traits he looks for in founders, and the value M12 can deliver in accelerating a startup's growth trajectory. Here are some excerpts from our conversation:

Tell us about M12 and its vision of investments in startups.
M12 is Microsoft's venture fund. We are purely a financial focused investor, squarely on the side of the founder, and the only metric we are accountable to is the success and the growth of our portfolio startups. One of the many ways we add value is by helping unlock the tremendous resources of Microsoft; think of us as smart money with the vision and scale to empower amazing startups in India and globally. Microsoft's mission is to empower every person and every organization on the planet to achieve more. And startups are a critical constituent of this mission.

M12 has been investing in India for a while. What was the reason to have a physical presence in India?
While we have been remotely investing in India for the past year, setting up an office is a logical step forward in our journey and commitment to the Indian ecosystem. Having a team on the ground in India makes the value we add more accessible and tangible. These are exciting times in India with fantastic entrepreneurs pursuing global opportunities, and we are here to partner.

What are the parameters you use to assess a startup globally? What will your focus be for Indian startups?
As a global fund, we have presence in San Francisco, Seattle, Tel Aviv, London, and now in Bengaluru. The bar we have for all startups is the same worldwide. We don't have a geo-allocation and we do not invest in competing startups. As we assess the competitive landscape across geographies, we decisively back the team that we believe is uniquely differentiated by either their IP or their business model, and then stay with them with single-minded focus all the way. Therefore, our parameters for assessment are the same irrespective of the geography.

In terms of sector focus, we reverse engineered that based on where we can add outsized value, and given our unique access and ringside view at Microsoft, B2B startups that are enterprise-focused is our core strength. Now within this broad category, the companies can range from applied AI, business applications, infrastructure, security and also vanguard bets. Essentially, all the areas where we have a good understanding of the market and can play an active part in helping the company scale through joint selling and co-marketing opportunities.

How does M12 decide on an investment?
Given that we are a financially-focused venture fund, we do not seek strategic alignment to invest in a company. We build our conviction around the team, validated product-market fit, demonstrated ability to execute, and most importantly the founder's ability to listen to the market and their customers. The journey to success is long and arduous, and most often there are multiple inflexion points along the way, and the companies that gain the right to win are usually the ones that have been listening all along.

We invest primarily in the Series A-C stages, with our first check into a company generally in the range of USD 2-10 million and preference for being on the higher end of that range with meaningful ownership. M12 is committed to founder-friendly terms with no non-standard terms or any strategic clauses. Our decision to invest takes into account staying committed for the life-cycle of the company and intent to participate in future rounds.

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What are the benefits that startups get with an M12 investment? And what is the typical engagement cycle?
We actively engage with the startups that we invest in. We are a part of their boards, we are there to listen, to help, to guide, to brainstorm, to make industry connections, to celebrate both the losses and the wins, basically to be a partner. Post-investment, our Portfolio Development team facilitates deep engagements with Microsoft engineering groups to explore product integrations if that is of interest to the startup. We also have a robust co-sell program that enables our portfolio companies to sell alongside Microsoft's world-class sales teams globally. We provide the right resources to scale – not just the capital, but also the M12 team and the power of Microsoft, to accelerate growth for portfolio companies. I am humbled that we have a part to play as an enabler.

Does M12 also engage with other VCs that are operating in the country? What is the nature of engagement that happens there?
Yes, M12 is very much a part of the VC ecosystem. We partner with our VC peers and look for opportunities where we can collaborate on opportunities, or even help with their portfolio companies. We have tremendous respect for the VC ecosystem in India and continue to strengthen our partnerships each day.

In terms of how we operate from a transaction perspective, we prefer to lead deals from a conviction perspective, however are equally comfortable with co-leading, or just participating depending on the deal dynamics.

What are the traits that you as an investor look for in founders?
Personally, I think what sets a great founder apart is empathy. And that empathy can take multiple shapes and forms – empathy for customer pain points, for people in the team, for organizational capability, for the partners, for the market evolution, for the competitors. It sounds very simple but is a rare trait indeed and even harder to practice in the face of adversity.

Microsoft announces program to accelerate growth of agritech startups in India

Microsoft announced the launch of a program for agritech startups in India that are committed to driving transformation in agriculture. The Microsoft for Agritech Startups program is designed to help startups build industry-specific solutions, scale, and grow with access to deep technology, business, and marketing resources.

Agritech startups in India are transforming agriculture by developing innovative digital solutions to maximize productivity, improve market linkages, increase supply chain efficiency, and provide greater access to inputs for agri-businesses. In its efforts to bolster the country's startup ecosystem, this program offers the best-in-class tech and business enablement resources to help agritech startups innovate and scale fast. Startups can also get access to Azure Farm-Beats, which can help them focus on core val-

ue-adds instead of the undifferentiated heavy lifting of data engineering. Available on the Azure Marketplace, Azure FarmBeats enables aggregation of agricultural datasets across providers and generation of actionable insights by building AI/ML models based on fused datasets. "Sustainable agricultural technology can transform the global food landscape. Agritech startup innovations are addressing some of our key challenges connected to agriculture and food production. The Microsoft for Agritech Startups program is among the early steps in our journey towards empowering these startups in India and transforming global agricultural practices," said **Sangeeta Bavi,** **Director, Startup Ecosystem, Microsoft India.** Spread across three tiers, the program offers a range of benefits, including tech enablement and business resources:

All startups: Qualified Seed to Series C startups can boost their businesses with Azure benefits (including free credits), unlimited technical support and help with Azure Marketplace onboarding.

Co-sell startups: Startups with enterprise-ready solutions can scale quickly with joint go-to-market strategies, technical support and new sales opportunities with Microsoft's partner ecosystem.

Co-create solutions: Startups that are looking to create digital agriculture solutions have the opportunity to co-build customized solutions with Azure FarmBeats without investing in deep data engineering resources. Using Azure FarmBeats, startups can acquire, aggregate and process agricultural data and rapidly develop their own AI/ML models.

Bringing together startups, corporates, industry bodies, governments, and venture capital firms, the program aims to create a shared platform for learning and innovation. With its strong focus on startups, advanced technology resources, and a rapidly growing partner ecosystem, Microsoft is uniquely positioned to help agritech startups build solutions, scale across global markets, and grow with industry-leading partnerships. To find out more about the program, please visit aka.ms/MSIndiaStartups.

Interview with Bipradas Bandyopadhyay, CIO, Zuari Infraworld

According to a recent report by KPMG, the demand for construction projects has already fallen due to poor sentiments, lowering operating surplus, and incomes, diversion of funds for COVID-19 management, and credit and liquidity problems. Bipradas Bandyopadhyay is a technology leader, with close to two decades of experience, feels that the Indian construction sector has a long way to go when it comes to technology adoption. Having a wide experience in tech, academics, he is currently the CIO of Zuari Infraworld. In a quick chat, he shares the ways, the transformations in the construction sector post-COVID and technology adoptions.

What are the ways, the construction sector is impacted by the lockdown?

The onset of COVID-19 pandemic has given a huge jolt in the operation of the construction sector and has impacted both Sales and Construction fronts equally. Social Distancing, lockdown measures, job losses, disruption of supply chain and movement of people have forced all the real estate developers to extend their timeline of completion of ongoing projects. With national and international economies bearing the brunt of this pandemic, there lies a very uncertain and tough time ahead for the real estate developers across the country where the need of the hour will be to re-organize and re-structure their operations to sustain their businesses. As people mindset in this pandemic situation will tend towards conserving their money due to the uncertain future, sales of residential units across the country are expected to diminish to a great extent in the year 2020 and beyond.

In general, what is the level of dependency on technology by Indian construction companies? How is it different from counterparts from other nations?

It generally depends on the construction company and their inclination towards investing in technologies appropriate to the industry. As such the standard project management software like MSP, Primavera are commonly deployed by mostly all of the companies and some of them would also use different ERPs such as Oracle, SAP, Navision to meet their operational requirements. In the construction activities per se, usage of technology by the Indian companies is not high as they still think it a labour intensive.

In contrast, the international construction companies have already moved ahead and deployed many advanced technological tools such as robots, sensors, automated tools (like plastering injector machines) in the field to carry out safer and faster construction work in a shorter time period. They also use advanced tools in project management activity which makes all approvals inside and outside the company, reviews, communications paper-less, and provides efficient tracking and monitoring systems. Usage of ERPs in those companies is widely spread with more focus to generate correct MIS and Financial reporting including the statutory filings as in those countries Governments have made a statutory filling online a long time ago.

What is the technological transformation you notice in the coming days specifically to the people-driven construction sector post-COVID 19?

Post COVID-19, a lot more focus is expected on the use of available technologies in construction activities such as the use of robotics, automated tools to replace the loss/reduction of manpower as workers have migrated to their homes, and may not be returning soon. In the sales front, almost all the activities will now move to Digital front such as virtual site visit, online booking, payments, online document management, property registration. Back office work in companies will become more technology-driven with a focus on making the paper-less office a reality soon.

How, from a support role IT teams in the construction sector had transformed into a cost-cutting and then later to a profit-making role, Since generic ERP Suites doesn't handle practical Industry nuances of yours, how do you manage the same?

IT team in the construction sector has currently many-fold activities to execute apart from the usual 'keeping the systems on' for IT infrastructure. The team has increasingly participated in Digital Transformation initiatives where their technical skills, resource management, and innovative skills have been fully utilized to make businesses agile and responsive to the market conditions. One key segment where IT teams have contributed heavily is the Digital Marketing medium where through the use of data analytics they have complemented marketing teams to make their strategies operational in an effective manner.

It is true that generic ERPs don't suit construction sector requirements (like Mbook, Indent, Work Order, RA bill, etc.) as they were designed initially keeping the manufacturing sector as a template. On that front, locally developed ERPs have played a significant role in suiting the requirements of the sector by providing a customized version of their ERPs. In this regard, it has been observed that in some of these locally developed ERPs the reporting or data consistency is lacking thereby making it difficult for companies to take decisions. Microsoft Dynamics (Navision) has captured the market quite well in recent times by being flexible to the requirements of the construction sector and providing its partners (like CETAS) authorization to deliver custom modules particularly suiting the need of the companies in India and outside.

What are the key suggestions/ advice you will provide for the graduates entering the IT teams of the construction sector?

As the graduates are fresh with no baggage in their minds, it will be easier for them to learn new technologies and make a mark in their career. The following are some of the key suggestions which would help them:

1) Ready to un-learn

2) Be Innovative to deliver product/service as per changing business requirements.

3) Be quick in your response (whether accepting/ rejecting)

4) Be firm in your decisions but suitably backed up by data

5) Ready to take advice from your seniors.

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