In This Issue..

Alumni Section

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Covid19 Impact on IT Industry: How a Software Engineer see it?

Covid19 (or simply say Corona Virus) has disrupted every aspect of our life and enforced a minimal lifestyle to us with a practice to keep no or very less baggage.

How many of you are planning to have a loan to buy your next Car? Frankly speaking, I am not.

Just go to flashback and think about Diwali 2019,each one of us had various few big or small goals for the year and were planning to have a new home, car, bike, laptop till next Diwali (or some other plans/dreams). Just think about those plans now and you can relate it to the reality of life. Anyways, time (no matter good or bad) passes and moves at its regular pace. This too shall pass and we shall be left with the stories only, to tell our next generations. It's totally upto us how inspiring those stories would be.We almost are living at 12th or 13th week with Corona and now I have started seeing that silver lining when I think about IT Industry in India. Indian IT industry survives on IT services outsourcing and with the increase in the demand for online platforms for everything (anything), I am foreseeing big boom in the demands for IT services.

Let me set the context. Our kids are using Online classes, our parents are talking to doctors on telemedicine apps, we are doing client meetings on teams/zoom, online payment is on a roll, fitness classes on video call is normal, YouTube channels and podcasts are booming like never before, Kirana (grocry) owners are moving to online mediums and what not, the world is moving at the fastest possible pace and we have covered the distance equal to a decade's journey, in just 12 weeks.

Global demands for IT services are definitely going to be upside in post Corona world and our biggies like Infosys, HCL, TCS, Tech Mahindra, NIIT, and many more are going to cater those demands. Accenture India and Sapient India, DSC and other MNCs will keep hiring low cost Indian engineers.

Facebook has invested in Jio, Google is investing in Vodafone India, and Amazon is in talks with Airtel. I am clearly seeing a big 5G war in India and that's going to create a lots of employment opportunities. Just prepare ourselves to get the biggest pie. (Protocol engineers, who can write network protocols as lower level OSI layers are the highest paid engineers irrespective to their experience level.)

Other part is small ticket requirements that are going to come big/small businessman, SMEs, schools, tutors, barbers, Pandit Ji and all others. This demand might go to the level of 12-20 Crore small projects of INR 50k to INR 5 Crore. That's huge, really huge and this demand is dependent on small freelancers and small IT startups only. I am running a community of programmers where we are working on such small projects and already started at small scale. Please join us at http://t.me/codepathshalagrp or write to codepathshala@gmail.com

This local and global demand is commercial and it's definitely going to be huge. Apart from that Government is bullish to build IT Infrastructure at any cost and we already are seeing a storm of IT related tenders.

Smart city projects are already undergoing and I am expecting the announcement of some 100 more smart cities very soon. Our infrastructure is not ready for disasters like Corona and we need more smart cities to make ourselves capable. These smart city projects will give big employment push to all sectors.

So, I am not seeing the depression in IT industry. Just need to show some patience and keep the wheel running.Be most important part is skill building and keep ourselves in the race with global competition. People should not hire us for our low cost, they should hire us for our talent. Cost is just to win over competition.

Changes in interviews and work culture:

Interviews might not be same again. White board interview might be a thing of past and new trend is going to be coding interview on integrated IDE on a shared code pad.Since interviews are not f2f, so very less benefit from body language. You need to run the code with unit test cases and this shift need to be managed at highest priorities. One should start practicing programming on daily basis to stay relevant. This is high time to follow something like #100DaysOfCode (a hashtag on Twitter, check to learn more about it). Coding platforms will be new mass recruitment portals and competitive programming challenges will be new screening tests. So, one should start making muscle for competitive platforms too,work culture is seeing big shift and now follow up updates on work are more frequent. One need to keep track of work on daily basis else things can go out of hand anytime.

No more monthly or bimonthly updates would work. It's getting tougher to stay focus and healthy lifestyle is a challenge in coming days. Discipline is the key to run longer.

Changes in education:

Education is going to be result oriented instead of current exam-based model. Getting marks will no longer work to get a good job. It's outcome-based learning that going to work in this coming era of online education.Your online certificate is of no use until you have something to prove the outcome of your learning. If we keep ourselves restricted to software related courses then one need to showcase his/her work on Github profile and number of positive comments on that code and the number of forks on your code is going to be your new grades. One should build online reputation by answering the questions on Stackoverflow and popularity on Stackoverflow will be judged as honors in the marksheet. I am witnessing a time when education, too, is going to be partnership based and the outcome of education in terms of student's earning will be college's profit in this partnership.

I am feeling excited by visualizing those golden days when no student would need a bank loan to pay his/her education. He/she just needs to showcase his work and need to show some testimonial as guarantee of work in future and college will be happy enough to enter into that partnership.

Are our colleges ready for this shift?

My dream classroom:

If I visualize a dream classroom then it is like when the teacher has given me topics of tomorrow's lecture and also given 10 problems that tomorrow's lecture is going to answer. I prepare the topic and tried to find some answers also.

Next day, my teacher took the lecture and explained the topic as per his/her experience. Then we together (teacher and all students) have discussed and tried to solve the problems and the outcome of the lecture is based on how many students have able to solve how many problems.

It will change our perspective towards the education. Classroom teaching will not work as an examination score making tool anymore. Classrooms will act like a tool to solve the problems and that's what education meant for in real sense. Students will be judged on the basis of total number of innovative solutions, total number of working models, and total number of mini/major projects/contributions.

What one can take from this article:

Theory of evolution teaches us that human brain is hardwired to perform best in the time of crisis and crisis can't be simulated ever. So, the time of crisis is biggest opportunity to make new inventions and to adopt new culture and new ways of life. History will remember us for defining new productive ways and new healthy ways to rebuild this world. We should not lose this once in a lifetime opportunity and should make a better history for coming future. Post covid19, time is going to witness many new job profiles too. Like every institution (school, college, law-office, hospital, manufacturing unit or whatever you can think) will have one or two IT administrator who knows everything about hardware, integration, network, and other operations. These people can be counted as remote work enablers.We shall also witness remote infra consultants who will help small businesses and enterprises to come online. These consultants will help businesses by providing them the right/optimal tool set and by providing required training to their staff. Don't ignore above two domains, this is multibillion opportunity and we are going to witness many such new job profiles in coming days.

Let's join hands to make ourselves superpowers of next decade.

Disclaimer: We had a webinar in KIET on 30th May 2020 and above article is inspired from that webinar. You can find complete recoding of that webinar in the links below:

Videos on discussion highlights:
https://www.youtube.com/playlist?list=PLy4xDb7T6cH51tyFFjL2iPfOchYZaTMsy
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The New Solution to COVID-19: Artificial Intelligence

Artificial Intelligence technologies are quickly evolving, primarily because AI processes large amounts of data much faster and makes predictions more accurately than humanly possible. In this worldwide health crisis, the medical industry is looking for new technologies to monitor and controls the spread of Covid-19 pandemic. AI is one of such technology which can easily track the spread of this virus, identifies the high-risk patients, and is useful in controlling this infection in real-time. It can also predict mortality risk by adequately analysing the previous data of the patients. It aims to review the role of AI as a decisive technology to analyse and prepare us for prevention and fight against Covid-19 and other pandemics.

Artificial intelligence is the simulation of human intelligence processes by machines. Artificial Intelligence technologies are quickly evolving, primarily because AI processes large amounts of data much faster and makes predictions more accurately than humanly possible. As the pandemic has rolled around the planet, countries are coming up with applications of Artificial Intelligence in order to come up which new and innovative ideas to battle against it. AI offers a number of advantages over traditional analytics and clinical decision-making techniques. Learning algorithms can become more precise and accurate as they interact with training data, allowing humans to gain unprecedented insights into diagnostics, care processes, treatment variability, and patient outcomes.

Healthcare organisations are in an urgent need for decision-making technologies to handle this virus and help them in getting proper suggestions in real-time to avoid its spread. AI works in a proficient way to mimic like human intelligence. It may also play a vital role in understanding and suggesting the development of a vaccine for Covid-19. This result-driven technology is used for proper screening, analysing, prediction and tracking of current patients and likely future patients. The significant applications are applied to tracks data of confirmed, recovered and death cases.

Hospitals, public health agencies, and commercial health companies are seeking accessible ways to screen patients such as online symptom checkers, which could allow them to screen themselves for signs of COVID-19.

An application can provide with early detection and diagnosis of the infection. It will help to provide faster decision making which is cost effective. AI is helpful in the diagnosis of the infected cases with the help of medical imaging technologies like Computed tomography (CT), Magnetic resonance imaging (MRI) scan of human body parts.

A platform can be built for automatic monitoring and prediction of the spread of the virus. An assistance will be provided for the analyses on the level of infections by the virus and also helps in identifying hot spots. This technology can track and forecast the nature of the virus from the available data, social media and media platforms, about the risks of the infection and it's likely spread. Further, it can predict the number of positive cases and death in any region. AI can help identify the most vulnerable regions, people and countries and take measures accordingly. AI is used for drug research by analysing the available data on Covid-19. It can help to identify useful drugs for the treatment of Covid-19 patients. It has become a powerful tool for diagnostic test designs and vaccination development. AI helps in developing vaccines and treatments at much of faster rate than usual and is also helpful for clinical trials during the development of the vaccine.

With the help of real-time data analysis, AI can provide updated information which is helpful in the prevention of this disease. It can be used to predict the probable sites of infection, the influx of the virus, need for beds and healthcare professionals during this crisis. AI is helpful for the future virus and diseases prevention, with the help of previous mentored data over data prevalent at different time. It identifies traits, causes and reasons for the spread of infection. In future, this will become an important technology to fight against the other epidemics and pandemics. It can provide a preventive measure and fight against many other diseases. In future, AI will play a vital role in providing more predictive and preventive healthcare.

Artificial Intelligence is an upcoming and useful tool to identify early infections due to coronavirus and also helps in monitoring the condition of the infected patients. It can significantly improve treatment consistency and decision making by developing useful algorithms. AI is not only helpful in the treatment of Covid-19 infected patients but also for their proper health monitoring. It can track the crisis of Covid-19 at different scales such as medical, molecular and epidemiological applications.

Majority of Indian Firms Believe Artificial Intelligence Can Improve Productivity: IDC

For over 65 percent of organisations in India, the primary drivers for using Artificial intelligence (AI) are improved productivity and faster time to market with new products and services, International Data Corporation (IDC) said on Thursday(28-05-20). Organisations across multiple verticals have been leveraging AI, driven by their own needs, but all of them are considering intelligent systems to either reduce effort on mundane tasks or establish specialized real-time insights for faster decision making, IDC said in a report titled "If You Think Artificial Intelligence Is Not for You, You May Just Want to reconsider".

This adoption has been varied across industries but has remained steady. Healthcare institutions and hospitals are deploying AI for clinical imaging and point-of-care applications. The banking, financial services and insurance (BFSI) vertical is exploring multiple use cases, varying from chatbots and conversational AI platforms to fraud detection in claims and insurance.

As other sectors explore AI, the public sector is almost initiating a similar arc of adoption, IDC said. "AI is not new. Over the years, it has progressed with organisations in India now exploring numerous use cases to realise its potential. Organisations are leveraging AI to enhance efficiency, improve productivity, and drive newer sources of revenue," Rishu Sharma, Principal Analyst, Cloud and Artificial Intelligence, IDC India, said in a statement.

"Hence, it is interesting to witness how these use cases vary from predominant verticals to the emerging ones," Sharma said. The report, which talks about the reasons for organisations in India to consider AI and the hurdles they are facing in the market, leverages the data from IDC's conversations with the end-customers along with IDC's Cognitive AI Adoption Survey, 2019, that involved talking to over 100 leaders in India.

"Traditionally, AI has been on the wish list of organisations and had not moved to the mainstream in terms of IT investments," said Sharath Srinivasamurthy, Research Director, Enterprise Solutions & ICT Practices, IDC India. "However, with increasing examples of real-life use cases being effectively handled by AI, organizations are looking at increasing their investments on AI to drive business outcomes," Srinivasamurthy said.

Google's plan to take on Azure, AWS in cloud computing

Google will leverage its advantage as a 'data company' and deploy technology as the key differentiator with expertise in areas such as Artificial Intelligence and Machine Learning Technology behemoth Google is investing heavily in people and partnerships to grab a larger share of the Indian Cloud market, as it takes on global rivals Microsoft, IBM and Amazon Web Services in the country, a top company executive said.

Google will also leverage its advantage as a 'data company' and deploy technology as the key differentiator with expertise in areas such as Artificial Intelligence and Machine Learning, said Karan Bajwa, the newly appointed managing director of Google Cloud in India.
"The technology is right. The brand is right. Google's hiring great talent and putting the right people in front of the customers, and there's very strong investments happening on the Google Cloud across the world, as well as in India," Bajwa told ET.
Only 20% of workloads have so far moved to the cloud and there is opportunity in the remaining 80% which has yet to migrate to public or private clouds, he said.
The ongoing economic crisis unleashed by the Covid-19 pandemic will fast track the shift as more companies look at cost efficiencies, Bajwa said.

Although IBM and Microsoft have a lead over Google in the cloud business, that was not a point of concern, he said.
"For 80% of the companies, the journey will start now, so the fact that somebody is ahead and somebody is behind, I honestly don't worry about it."
As capital becomes scarce going forward, people will want to conserve every dollar. "It's going to move to an operational expense from a capital expenditure. So, there will be a faster acquisition of customers," he said.

Google will build a "differentiated partner strategy" compared to rivals. It will also leverage on its huge reach due to its dominance of Search and areas like payments and advertising, he said.
Over the last 60 days, "digital natives" have been looking to optimise existing technology, and companies that have so far not adopted the cloud are opening up to the opportunity due to cost pressures, he pointed out.

"We've always seen that incumbency is a strong advantage, Google's incumbency has built the business in most of these organizations where Google is helping these customers acquire new customers, get into new markets, grow revenues, grow margins, and that's a very strong incumbency than anyone else," Bajwa, who was earlier IBM India head and who has had a long stint with Microsoft as its MD of sales and marketing, said.

Google will bet on building a team that wins top customers and competes with the dominant players, he said. "By the time we are done with Covid-19, we will be bringing on board very senior people from the industry who have led organizations and who have very strong credibility. That makes a huge difference as customers feel comfortable with the people they are buying from," he said.

Last week, Google appointed Microsoft veteran Anil Bhansali as vice president of engineering. Google already has a tie-up with Bharti Airtel for its cloud business and the search giant also recently announced a second cloud region in Delhi, after it launched the Mumbai region in 2017.

Election Commission, IIT-M join hands to develop new technology for voting

The project is at present in the research and development stage with an aim to develop a prototype, another official said. The Election Commission has collaborated with IIT Madras to work on a new technology which will allow electors to vote from far away cities without going to the designated polling station of their respective constituencies, a senior poll panel official has said.

The project is at present in the research and development stage with an aim to develop a prototype, another official said. Explaining the 'block chain' technology involved in the project, Senior Deputy Election Commissioner Sandeep Saxena said the concept is a "two-way electronic voting system, in a controlled environment, on white-listed IP devices on dedicated internet lines, enabled with biometric devices and a web camera". He, however, made it clear that voters will have to reach a designated venue during a pre-decided period of time to be able to use this facility. It does not mean voting from home, Saxena explained, which is "anytime-anywhere-any device" and would require some more time and technological advancement.

Explaining the technicalities, the Senior Deputy Election Commissioner told PTI that the "two-way block chain remote voting" process would involve voter identification and authorisation using a multi-layered IT enabled system working on the EC's e-Governance award winning Electoral Registration Officer Network (ERO Net) using biometrics and web cameras.

After a voter's identity is established by the system, a block chain enabled personalised e-ballot paper (Smart Contract) will be generated. When the vote is cast (Smart Contract executed), the ballot would be securely encrypted and a block chain hashtag (#) will be generated. This hashtag notification would be sent to various stakeholders, in this case--the candidates and political parties, the official said. The encrypted remote votes so cast would once again be validated at the pre-counting stage to ensure that they have neither been decrypted, nor tampered with or replaced.

"Suppose there is a Lok Sabha election and a Chennai voter is in Delhi. Instead of returning to vote in his or her constituency or missing out on voting, the voter can reach a predesignated spot set up by the EC, say in Connaught Place, in a particular time window and can cast his vote," Saxena said. He said such voters may have to apply in advance to their returning officers to exercise the option.

Another top EC functionary, who refused to get quoted, said at present it is only a research and development project. If the technology is found to be "okay", then only after stakeholder consultations and changes in the election laws and rules, it will be tried in actual conditions, he said.

There have been demands from various parties that the Election Commission should ensure that migrant workers who miss out on voting as they cannot afford going home during elections to exercise their franchise should be allowed to vote for their constituency from the city they are working in.

A bill to allow proxy voting for overseas Indians had lapsed following the dissolution of the previous Lok Sabha. The Law Ministry had also recently tweaked election rules to allow One Way Electronically Transmitted Postal Ballot System (ETPBS), enabling service voters consisting of personnel belonging to the armed forces, central para military forces and central government officers deployed at Indian missions abroad, to get their postal ballots electronically. They have to fill up the ballot papers and post them back. During the 2019 Lok Sabha elections, the ETPBS system helped such service voters in participating overwhelmingly in the polls, with the turnout of almost 62 per cent which used to be dismally low in single digits earlier.

Google Maps makes it easier to share your location using Plus Codes on Android

This new feature is available in the Android version of Google Maps.

Google introduced Plus Codes in Maps back in 2015 in a bid to make it easier for people to find places that don't have a physical address or are simply difficult to find. Now, the company is making it easier for the Android users to share their location using Maps' Plus Codes.

To give you a brief about the feature, Plus Codes are simple and easy to use digital addresses that have been derived from the latitude and longitude of a users' location. These codes can be used to uniquely identify any location. They work in places that haven't been mapped and they don't use country codes to identify an individual's location.

The company launched this feature in India back in 2018 to enable Maps' users to share addresses. Now, the company is bringing an update to Google Maps that makes using this feature a tad bit easier.

How to find and share your Plus Code:

Step 1: Open Google Maps App.
Step 2: Find your exact location.
Step 3: Tap on the blue dot that highlights your location.
Step 4: Now you will see the Plus Code representing your location on top of the screen.
Step 5: Use Share your Location option to share your plus code.
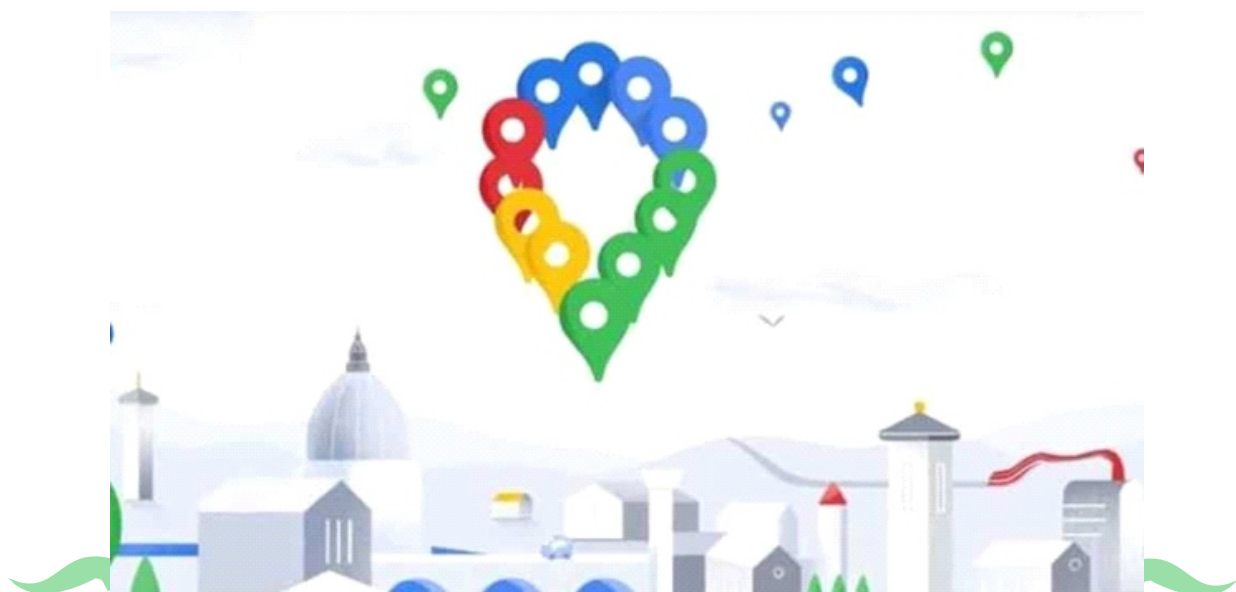
Raspberry Pi 4 with 8GB RAM launched, costs $75

Raspberry Pi has also launched a beta version of its 64-bit Raspberry Pi OS. Raspberry Pi Foundation has launched the most powerful Raspberry Pi model ever.

The company first launched the Raspberry Pi 4 last year. At the time of the launch, it was available in 1GB, 2GB and 4GB RAM variants. Now, nearly a year later the company has launched an 8GB RAM variant of the Raspberry Pi 4 at a price of $75 (Rs. 56,70 approximately). This makes the device not only the most powerful but also the costliest Raspberry Pi model ever. It also enables users to use applications that require higher memory to function on the Raspberry Pi 4 powered devices.

Greater memory space is not the only thing that has changed in the newly launched model. The Raspberry Pi foundation says that in addition to the RAM, the power supply components on the board have been shuffled a bit. The switch-mode power supply has been removed from the right-hand side of the board next to the USB 2.0 sockets and a new switcher has been added next to the USB-C power connector.

The company said that it was planning to launch the device almost three months back. However, the pandemic caused some delay in its plans. "While this was a necessary change, it ended up costing us a three-month slip, as COVID-19 disrupted the supply of inductors from the Far East," the company wrote in a blog post.

In addition to this, the company has also launched the 64-bit version of its operating system system, called the Raspberry Pi OS, in beta. "Both our 32-bit and 64-bit operating system images have a new name: Raspberry Pi OS. We think the new name will help more people feel confident in using our computers and our software," the company wrote adding that it has also released an update to the Raspberry Pi Desktop details of which will be shared later.

Windows 10 May 2020 update roll-out begins: How to download and install, top features

Microsoft's latest update for Windows 10 users is here. Here's how you can install the new May 2020 Update on your PC.

Microsoft has begun rolling out the long-awaited Windows 10 May 2020 update for end users. The company had announced the initial availability of the update through its Windows Insider Program in April this year. As expected, the Windows 10 May 2020 update brings a host of new features and improvements to the existing ones.

How to download Windows 10 May 2020 update

To download the new update, follow these steps on your Windows 10 PC or laptop.
Step 1: Open Settings on your device.
Step 2: Choose Update & Security.
Step 3: Select the Windows Update. Check for updates.
Step 4: If you see the availability of the update, click "Download and install."
Step 5: Once the installation is complete, choose the time you want to reboot the device to complete the process.

Windows 10 May 2020 Update: Top features

Gaming: Microsoft has rolled out support for DirectX Ultimate which helps deliver smoother graphics without affecting the frame rate. The company has also added support for third-party widgets in the Xbox Game Bar.

Browsing: Microsoft said that Edge browser is the first Win32 app to take advantage of the segment heap capabilities. This will allow the browser to consume lesser memory than before. Microsoft claims the latest update helps reduce memory usage by up to 27%.

Cortana: The digital assistant now comes with an improved chat-based interface. Here, users can choose to speak or type to get a response from the assistant. Users can ask queries such as "Am I free at [time]."
Your Phone: With Windows 10 May 2020 Update, Microsoft has added Your Phone's Call feature to ARM-based PCs. This will allow ARM users to respond to incoming calls to your Android phone directly through PC. You can also check notifications and access gallery on your PC through the Your Phone app.

Coronavirus pandemic: Red Cross calls for end to cyber attacks on healthcare sector

Microsoft Corp President Brad Smith and former U.S. Secretary of State Madeleine Albright are among the 42 co-signers of the letter initiated by the non-government CyberPeace Institute whose mission is to prevent the internet from becoming "weaponized."

The Red Cross called for an end to cyberattacks on healthcare and medical research facilities during the coronavirus pandemic, in a letter published Tuesday and signed by a group of political and business figures. Such attacks endanger human lives and governments must take "immediate and decisive action" to stop them, the letter stated.

"We are hoping that the world's governments will step up to affirm their commitments to the international rules that prohibit such actions," said Peter Maurer, president of the International Committee of the Red Cross, in the letter. Microsoft Corp President Brad Smith and former U.S. Secretary of State Madeleine Albright are among the 42 co-signers of the letter initiated by the non-government CyberPeace Institute whose mission is to prevent the internet from becoming "weaponized."

The demand comes one month after the Czech Republic said its healthcare sector had come under digital attack, which prompted a fiery response from U.S. Secretary of State Mike Pompeo. In a statement, Pompeo called the attack "deeply irresponsible and dangerous," adding that the culprits should "expect consequences." The Czech Republic and U.S. government have yet to say who was to blame.

Over the last several months cybercriminals have targeted hospitals with computer viruses, usually in schemes to extort them or hold their data ransom. More sophisticated hacking groups, such as those associated with governments, have also targeted medical research centers to steal valuable data about COVID-19 treatments.

IBM's release new AI offerings have a big India

IBM research India played a lead role envisioning, researching and developing many of these AI-driven innovations in collaboration with other IBM Research labs in the US and Switzerland.
IBM's latest offering IBM Watson AIOps, which deploys artificial intelligence to automate the way enterprises detect, diagnose and respond to IT anomalies in real time has a strong India footprint. There's also significant Indian contribution to the company's new suite of AI based application modernisation tools for cloud infrastructure.

IBM research India played a lead role envisioning, researching and developing many of these AI-driven innovations in collaboration with other IBM Research labs in the US and Switzerland. GargiDasgupta, Director, IBM Research India and CTO, IBM India said these research-led products which are a core part of the company's strategy has been incubating for the past one year.

At the company's virtual digital conference 'Think Digital', IBM's CEO Arvind Krishna said that current crisis has brought enterprises' vulnerabilities to forefront and companies are responding by adopting artificial intelligence and hybrid cloud-based IT architectures.

"I'm predicting today that every company will become an AI company -- not because they can, but because they must," Krishna said.
With businesses accelerating cloud adoption, IBM's new set of AI tools for cloud application modernisation also was led by the India labs. AmithSinghee, STSM and Senior Manager, Hybrid Cloud says that biggest challenge around modernising of cloud services largely is related to medium to large clients across industry sectors.

"We have looked at application patterns across travel & transportation, finance, insurance, retail, consumer and have generalised solutions to work across industry sectors," Gargi says, adding that current conditions makes a stronger case for automation and autonomic management more than ever.