### My answer to “What is the effect of the covid-19 pandemic on AI-based startups?”

Originally Answered here: <https://qr.ae/pNC3bb>

There are two types of startups using AI IMO :

1. AI first startups : Companies that are selling an AI algorithm or outputs of an AI algorithm as its product. My startup [Image Recognition to Optimize Retail Execution](http://paralleldots.com/)
2. belongs to this category. There can be variety of startups in this category trying to sell chatbots, automated surveillance, voice recognition systems, fancy apps that change face photos into old/young or morph them, heck even startups which provide AI tools to ensure compliance during COVID19-prevention which fall in this category.
3. AI augmented companies : Companies that use AI to enhance an already existing products they have or trying to integrate AI into their product. Typical examples would be an email service providing company trying to use AI to assist writing, a manufacturing company trying to deploy smarter robots in their factories, CRM trying to rate prospective leads and an e-commerce company showing recommendations to its customers.

As you might be easily able to guess, there will many more companies of type 2, as most organizations have some or the other problem statements they would like to address using AI algorithms. Basically every company in the world whose core product is not an AI algorithm falls in 2. These companies account for most AI related jobs as A. They are relatively larger companies than most AI first companies, most AI first companies are smaller startups as of today and 2. There are just too many AI augmented companies as compared to AI first companies.

This differentiation was necessary as COVID19 disruption needs to thought of in different ways for 1 and 2. You cannot merge them both into a single set of predictions.

**AI first companies :**

When you are looking at AI first companies, their trajectory during COVID19 is dependent upon what customers are they serving and what problems are they solving. Different companies saw different outcomes. The following characteristics provided worst-to-best outcomes for companies :

1. Companies which were serving industries which depended upon people moving out of their homes will have had very severe outcomes. These are companies which provided AI solutions to travel sector, malls, hotels, airlines, offices etc. Money in such verticals is almost non-existant for time being and will be for sometime.
2. There are industries which despite being hit with COVID-19 cannot close down as they are essential industries. These are retail, healthcare, government services, telecom, banking etc. AI startups these industries saw steep revenue declines during lockdown period as everyone was really afraid at that time and was observing how will the future look, however, with markets reopening, the revenues are slowly becoming stabilized and coming back to normal. New pilots have started rolling out too. Such companies are taking precautions.
3. Both of the above points were for B2B AI startups. B2C startups, if they had any chance of becoming successful, would have had a great time during COVID-disruption as people were locked down at homes and had lot of free time to spend on their phones. Many face swap videos and lipsync videos made using AI went viral on the internet during the disruption.
4. It has been a really great time for startups that help institutions monitor COVID19-prevention compliance or help companies and organizations maintain social distancing or help them move their operations online during COVID19 as their services became “pain pills”. A few startups with bad outcomes in 1 (or maybe 2), launched new AI products of this category. This involves some kinds of chatbots, face mask monitors and AI+robotics applications reducing/removing human contact. Ecommerce and delivery AI startups should be having a great day as well.

Net-Net, some companies gained, other companies lost.

**AI augmented companies :**

The story is very different here. Please remember that while for some companies like OTT, e-commerce etc., AI has shown clear cut value; most companies in this category are running AI Proof-of-Concepts and Product Development in hope that one day they should be able to get lead over their competitors using their AI edge. So most AI operations in such companies (startups or even larger) are discretionary/R&D expenses. Most startups during COVID19 disruption have cut discretionary expenses to prolong their runway. Same would be the case with larger companies too. This have brought expansion in AI activities and hiring in such companies to a standstill. Hence, you would see tweets like this :

I think it's clear that for many smaller companies that invested in deep learning, it turned out not to be essential and got cut post-Covid as part of downsizings. There are somewhat fewer people doing deep learning now than half a year ago, for the first time since at least 2010

— François Chollet (@fchollet) [August 30, 2020](https://twitter.com/fchollet/status/1300137812872765440?ref_src=twsrc^tfw)

Hope this answers your question.

### My answer to “Have small tech companies such as Fastly been affected by the pandemic in the same way as large tech companies like Microsoft?”

Originally Answered Here: https://qr.ae/pNCdmF

Tech companies serve either other companies (B2B) or consumers (B2C). When an uncertain situation comes up, any customer (be it companies or consumers) will tighten the strings of their purse as its hard to predict the future. When less money is in circulation, you see GDP falling and companies, businesses and even government making lesser money. Companies who are already alert will react to sudden revenue decline even more proactively, cutting off discretionary expenses like say R&D or new projects or HR redundancy. That gets many projects defunded, wages cut and you see even lesser money being spent. Basically a vicious cycle of economic bust. It exactly opposite of what happens in economic growth. Its hard to visualize this, but a lot of economy is just people believing that a company, country or economic system is “worth putting in money”.

I do not think big company / small company dichotomy can be used to explain which tech company did bad or well during pandemic disruption. A company’s performance during/after pandemic IMO will be dependent upon a combination of :

A. how hedged company is against risk,

B. how much does pandemic effect the customer base of the company and

C. whether the pandemic creates new opportunity for the company.

I did a very detailed analysis in terms of AI startups here: [Muktabh Mayank's answer to What is the effect of the covid-19 pandemic on AI-based startups?](https://qr.ae/pNC3bb)

The combination of three factors A,B and C above make sure that you have super success stories in startups (new decacorns like Fastly or Zoom were born) where on the other hand many startups shut shop or cut their team massively. Startups whose consumer base did not get effected or ones who were hedged with large runway actually many a times used the pandemic as an opportunity. Because startups differ at A,B and C, you see varied results like :

Digital Transformation Reality Check: Not all SaaS companies have benefited from Covid! In fact, I'd argue only 3 (Zoom, Shopify, Fastly) have truly benefited. With Q2 earnings mostly under wraps, we can look at the absolute change in growth rates from Q2 - Q1 [pic.twitter.com/uYVKpxd3Pi](https://t.co/uYVKpxd3Pi)

— Jamin Ball (@jaminball) [September 10, 2020](https://twitter.com/jaminball/status/1304179212366958593?ref_src=twsrc^tfw)

Large companies are generally supposed to be more fragile and strong to take advantage of opportunities that arise due to a disruption like the pandemic, but many of them were busy buying back there shares instead of hedging themselves and they now have to beg for shareholders to bail them out.

### My answer to “Is WFH a bonus for tech firms?”

Originally Answered here: <https://www.quora.com/Is-WFH-a-bonus-for-tech-firms/answer/Muktabh-Mayank>

Maybe, but we don’t know that

Large scale WFH has never been tried before. The tech industry had two alternatives, large scale Work From Home (WFH) or shut down work temporarily. 100s of people sit in a common workplace with air conditioning and it was extremely risky to continue in office work. Between two options work from home was better without doubt.

Whether WFH is better than regular office is still not clear. Companies save money by not paying office maintenance or sometimes office rents altogether. So assuming nothing else changes, the companies should be at a gain. But, things are not that simple.

Working from home has created new challenges, like say, time sync and even simple things are relatively hard to communicate. While people who have more visibility have equal productivity, freshers find it harder to work remotely. We still dont know if the penalty due to these challenges is lesser than the office expense saving or no. But we know that the penalties should get better with time as people slowly overcome their inhibitions over working remotely.

[Remote work from home during coronavirus pandemic hurts collaboration, innovation](https://fortune.com/2020/08/10/remote-work-from-home-cost-zoom-innovation-google-goldman-sachs/)



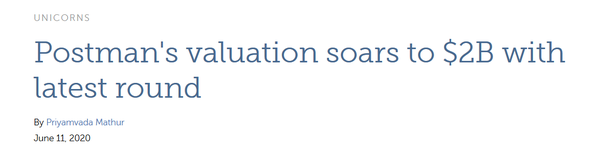
### My answer to “Has India's Silicon Valley’s success been neutralized by Covid-19?”

Originally answered here: <https://qr.ae/pNF5Vr>

What do you mean by India’s Silicon Valley ? Do you mean Indian startups ?

I personally think we haven’t had any success as a Silicon Valley alternative. We dont develop nearly enough good technology products yet. We have huge operations based startups like E-Commerce, e-Grocers, e-Milkmen, e-classes(edutech) and e-XYZs. These according to me dont qualify as Silicon Valley “success”. Only successes we have had with pure tech play in past are Chennai SaaS heavyweights like [Zoho - Cloud Software Suite and SaaS Applications for Businesses](https://www.zoho.com/)

and [A fresh approach to customer engagement](https://www.freshworks.com/) . That said, we are slowly beginning to see Indian success in High end Technology startups like say [Home - GreyOrange](https://www.greyorange.com/) , [Hasura | Instant GraphQL APIs for your data | Join data across databases, GraphQL & REST services to build powerful modern applications](https://hasura.io/) and [Postman | The Collaboration Platform for API Development](https://www.postman.com/) . One year of bad economics is not going to change or reverse the trend. Postman infact became a unicorn (valued at US$ 2B) during the COVID pandemic. [Postman's valuation soars to $2B with latest round | PitchBook](https://pitchbook.com/news/articles/postman-valuation-2-billion)



Ok. But I think to most Indians, Silicon Valley success in India generally means the Flipkarts and other operations startups which deliver your milk or groceries or cellphones or teaches math to your kids or helps you sell your old and new stuff. Luckily, these startups are growing better than expected. In fact, they are growing at the cost of regular Indian businesses due to the lockdowns, fears in going out and quarantines. You can read 100s of articles about the Antifragile Indian startup ecosystem published in last few days

### My answer to “Why are top companies like Uber and Oyo laying off so many employees during the COVID-19 pandemic despite being the top in their sector?”

Originally answered here: <https://qr.ae/pN5T5P>

{I am trying to strip it down to very basic answer, it might actually lose some depth here in the way to make the big picture clear. Do understand that there are many many more details into play and all businesses are unique. }

To understand this, you need to understand how these high growth startups work as opposed to large companies.

1. Large established companies have had a lot of time to settle in the market, optimize their practices to better their bottomline and thus optimize profits. That is once an established company/business is sure it has reached the peak market share (equilibrium between customer acquisition / attrition ), it would then try to optimize expenses, thus maximize profits and invest some parts of profits into innovations to launch new products. So in time of crisis, its a pretty simple process for the established businesses, they will cut down discretionary expenses and focus on their optimized profit making core. So they will cut jobs for products that make less profit, but the employees who work on their power products, continue to work and thrive. It is wrong to just blame all layoffs on startups, established companies have done layoffs too. [Britain's Rolls-Royce to cut 9,000 jobs amid air travel slump - The Economic Times](https://economictimes.indiatimes.com/news/international/business/britains-rolls-royce-to-cut-9000-jobs-amid-air-travel-slump/articleshow/75842204.cms)

; [AT&T Layoffs: Carrier To Lay Off Thousands Due To COVID-19](https://www.crn.com/news/networking/at-t-layoffs-carrier-to-lay-off-thousands-due-to-covid-19) ; [Emirates resumes layoffs, fires 800 pilots in a day](https://www.moneycontrol.com/news/business/companies/emirates-resumes-layoffs-fires-800-pilots-in-a-day-5524231.html) ; [India’s IT sector may see mass layoffs as demand outlook remains weak](https://www.indiatoday.in/business/story/global-it-industry-india-mass-layoffs-weak-demand-coronavirus-1698199-2020-07-08) ; [Hershey Entertainment extends temporary layoffs for more than 600 employees to more than 6 months](https://www.pennlive.com/business/2020/07/hershey-entertainment-extends-temporary-layoffs-for-more-than-600-employees-to-more-than-6-months.html)

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* High growth startups are however a very different type of business. The point is to achieve the worth and scale of a well established company in a few years or a decade (Something that an established company would have achieved in many decades or in over a century even). For example, Tesla is now worth more than any other automobile company in the world, worth even more than Volkswagen, GM, Ford, companies around 100 years old. Amazon is worth more than any other retail chain, in fact many other retail chains combined. Airbnb is larger than many huge hotel chains. Uber is larger than any other taxi rental. How did these companies achieve in a few years that larger businesses took decades to do or probably could never even achieve ? Because they work in a different way. They invest in topline to achieve economies of scale / network effect, after which their unit economics is supposed to suddenly click. Lets try to break down the statement I made just before this, what is Unit Economics ? that is profit in every transaction. So for example, I make an Electric Vehicle for cost X, I will have to sell it for Y (Y > X) to achieve a profit. The more the value of Y-X is, more is the profit per vehicle, Unit Economics means Y-X > 0. High growth startups/companies will not wait to optimize bottomline to make Y-X > 0 to launch their product, they will start with maybe X > Y and pump money to scale. The entire plan is that at scale, the cost X goes down automatically, so beyond a certain point of market growth, the company should automatically achieve unit economics. This is driven by economies of scale and/or network effect, both of which are very well known phenomena in Economics. So the large sums of money these startups raise are used to pump more and more money to achieve growth to reach unit economics. So when a startup raises money A, it gets a target, to reach C customers by date D. An example would be startup raising in Feb 2020, 1 million dollars to reach 50000 Monthly Active Users by Feb 2021 raised by a company. The startup plans to pump almost 8000 dollars per month to achieve the numbers. What happens when pandemic disruption hits and startup does nothing? the startup will not be able to customers at nearly the rate they expected while they will continue burning money at the rate expected. Thus, the next round of funding will not be possible as the investor will only put money at 50000-ish MAUs. A sure shot path to the startup doing nothing shutting down in future. So, these companies acknowledge that they will be not able to show the growth, and will hence cut costs, such that whenever the circumstances become OK, they can come back to their old trajectory. They will still achieve lesser than what they were expecting in the start with the amount of money they have (because they are bleeding all that extra money during COVID19 despite a reduced burn rate and little growth), but at least the startups will survive to show growth. Cutting costs involves reducing salaries, layoffs, closing offices .. so on..