



Vidya Vikas Education Trust's

# Universal College of Engineering

Accredited with B+ Grade by NAAC

(Permanently Unaided | Approved by AICTE, DTE & Affiliated to University of Mumbai)

Gujarati Linguistic Minority Institution

## CURRENT WAVES

The Official Newsletter of Dept. of EXTC, UCOE  
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## College Profile

Everything you need to know about us.

Embraced by lush greenery and scenic beauty, Universal College of Engineering is a treasured place for aspiring engineers to leave their imprints on success.

As a college within the wider network frame, we are one of the fastest-growing institutions in India. Our institute has been accredited by the National Assessment and Accreditation Council (NAAC) with a B+ grade in the first cycle of accreditation. Times of India Survey Ranked No. 1 in India among Top Emerging Private Engineering Institutes for 6 consecutive years 2015, 2016, 2017, 2018, 2019, and 2020 and the saga of accolades still continues.

In response to the expectations of quality technical education, our college is approved by the All India Council for Technical Education (AICTE), New Delhi; Recognized by the Directorate of Technical Education (DTE), Government of Maharashtra; affiliated to Mumbai University.

Our college is also associated with professional bodies like IEEE, IETE, ISA, and CSI to update the revolutionary technological advancements.

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*We offer 4 years of full-time Bachelor of Technology in Computer Engineering, Civil Engineering, Artificial Intelligence & Machine Learning, Information Technology Engineering, and Data Engineering.*

The unique state-of-the-art facility of the institute has been carefully designed to accommodate the needs of the students. Laboratories are equipped with world-class facilities based on the latest technology of different sectors. Our smart classrooms are well ventilated, spacious, and equipped with overhead and LCD projectors along with the public address system. The College library provides a rich collection of specialist library resources and services to support student's academic work and enrich their research skills.



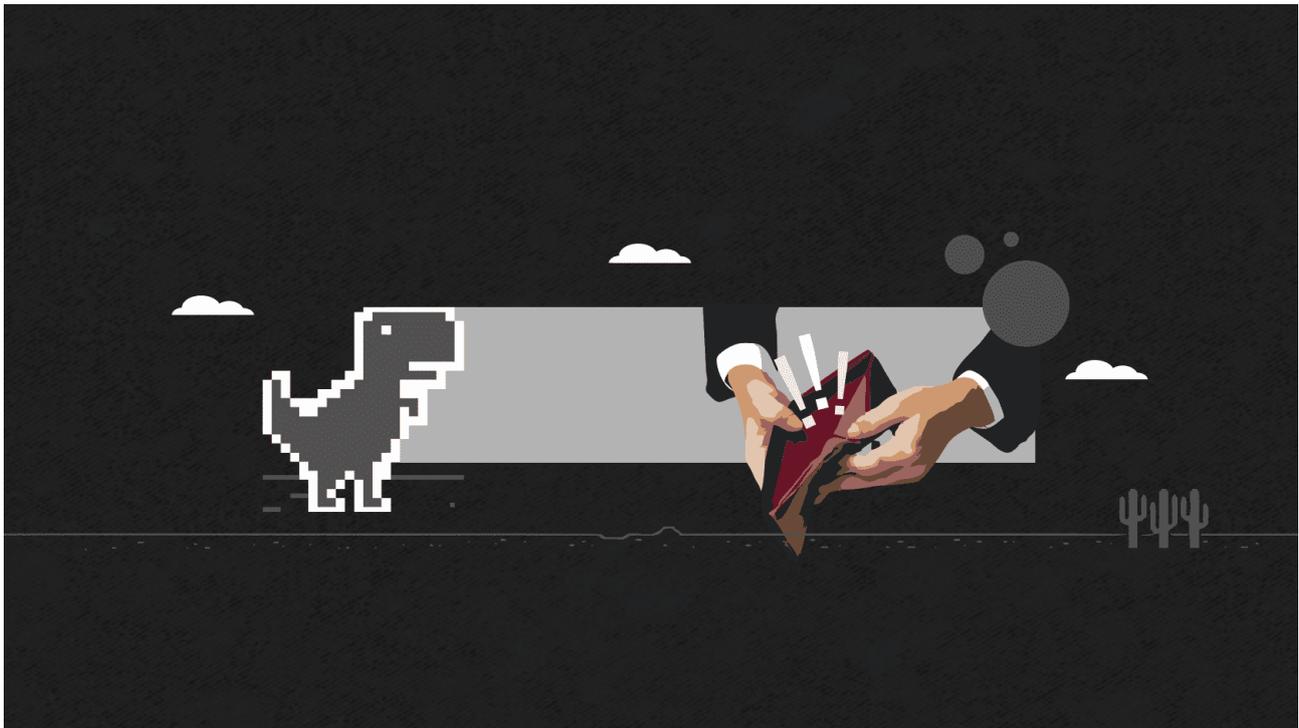
We are obliged to equip our students to get placed in highly reputed companies by mentoring their necessary skill set for cutting-edge technologies. The core highlighted areas are helping students with their technical competency, communication skills along with career guidance and counseling.

Universal College of Engineering has produced a large number of successful alumni who are working in reputed organizations in India and abroad and have contributed immensely to the cause of nation-building and society. We welcome all engineering aspirants to create an incredible legacy in the field of engineering.



# No internet, No cash, No problem

In this newsletter, we see how the RBI framework for offline retail payments could affect our lives



## *Policy*

### *The story*

Here's a stunning fact for you. According to official government data, there are still some 25,000 villages in the country that don't have access to the internet. And in Arunachal Pradesh for instance, there are still around 2223 villages that don't have mobile or internet connectivity. It's quite remarkable and it also means, that financial inclusion will be a distant dream for people living in these parts of the country.

They'll never get to use digital banking. They'll never have the chance to access UPI. And they'll never be able to transact seamlessly if they don't have ready cash at their disposal. And considering commerce is the bedrock of any community, the lack of payment infrastructure may be a sore point for people

living in these areas.

But then a ray of hope. In a bid to expedite progress on this front, the RBI on Monday unveiled a new framework that cleared the path for enabling offline digital payment. That means sending money via your favourite payment apps, without an active internet connection.

Yeah, that's right. We are talking about offline payment solutions.

According to current guidelines, you can do this subject to a few limits. For starters, you only send and receive ₹200 over a single transaction. And you'll also have to contend with a spending limit of about ₹2000 at any given point in time. But perhaps the biggest

bottleneck is that the limit can only be reset once again in the online mode with an additional factor authentication. So if you really have no access to the internet for long periods of time, this can be a bit of a bummer. However, having said that, it's still progress and there's no doubt that this will help more people to go digital.

More importantly, it could also help people who have a patchy internet connection. If you're stuck in a hotel without network connectivity, this could come in extremely handy. And the RBI has been working pretty hard behind the scenes to make it happen. Just last December the regulator expressed a desire to retool UPI for use on feature phones—which is important considering ~44 crore people still use feature phones. And they've also been conducting pilots in a bid to see how prospective solutions would work in real-life settings.

But how will this work? How does one enable offline transactions without access to the internet?

Well, there are multiple companies working in conjunction with the RBI to facilitate offline payments. Take for instance VISA. A few months ago, VISA said that it would introduce special cards that would facilitate transactions in areas with little or no connectivity. These cards would likely act like wallets with a pre-loaded amount. If you have the balance, you can transfer it over to another card without internet connectivity. However, if you don't have the money, then the transaction won't go through.

Elsewhere, NPCI (National Payment Corporation of India) has dabbled with text messages to facilitate payments. If you have a feature phone, you could simply send a message with a specified code and transfer money if you have USSD mobile banking services enabled. Side note—It's not really taken off in a big way.

Then there are startups using new methods to help people transact without internet connectivity. One company uses soundwaves or NFC to facilitate payments without the need for the internet. So yeah, it's likely that

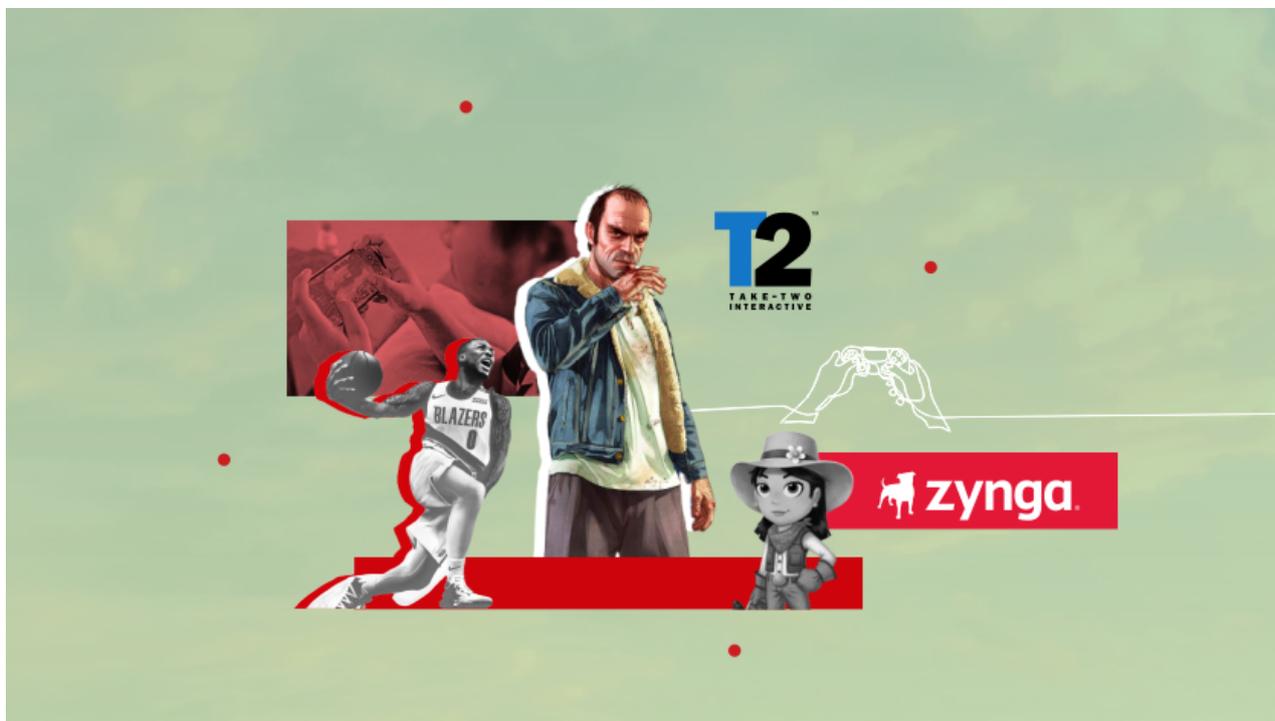
you will begin seeing many companies try to make a dent in this space as we move on and we may also see incumbents like Google Pay and PhonePe introduce this feature.

Maybe this is the beginning of a new offline revolution—the kind we saw when NPCI introduced the ubiquitous UPI.

Maybe this is what we needed to bring everyone into the digital payments fold.

# The biggest deal in gaming, ever

In today's newsletter, we see why Take-Two Interactive paid \$12.7 billion to acquire Zynga



## Business

### *The story*

Take-Two Interactive is best known for making captivating and immersive games like NBA 2K and Grand Theft Auto or GTA—decades-old smash hit franchises you can play on consoles and PCs. Meanwhile, Zynga is a dominant force on mobile, better known for casual laid-back games like FarmVille, and Poker. Last week both companies made a massive splash when they announced that Take-Two Interactive was acquiring Zynga for an eye-watering \$12.7 billion. And if you are wondering if it's the biggest deal in the space, yes, it is the largest deal in the video games industry by a handsome margin. But before we dive into the reasons explaining Zynga's hefty price, here's some context on the world of gaming—

People often mistakenly think of the video game industry as this small niche thing that attracts a small minority of the population. In truth, however, they are quite big. As in really really big. Bigger than movies, bigger than music, bigger than those two combined. For starters, revenues from video games dwarf box office numbers. In fact, they have done so for many years. Sure, you can throw in revenues from streaming too, but it still won't catch up with gaming. That ship sailed a long while ago.

Last year, video games brought home around \$180 billion in revenues. These include revenues from PC games, fetching about \$36 billion, and consoles like Xbox, PlayStation, and Nintendo—

responsible for some \$50 billion.

But it was mobile games that truly hit the jackpot, clocking in around \$90 billion in revenues alone—as much as PCs and consoles combined.

Mobile gaming is also by far the biggest and fastest-growing segment of the industry. It has a naturally wide userbase. All you need is a decent smartphone or a tablet and you're good to go. And since the world happens to have a lot of smartphone users—~3.9 billion as of 2021—who are willing to splurge on mobile games, this industry has massive potential. Apple for instance made \$85.1 billion from app store purchases in 2021, but 70% of all app store revenue came from gaming apps. And 70% of this revenue was generated by less than 10% of all app store users. So it's a small subsection of people that are really putting up the big money.

Needless to say, Take-Two has taken note of these developments. The company now believes that a marriage with Zynga is just the thing they need to gain a greater foothold in the mobile industry.

Zynga specializes in making free-to-play games. Games that don't cost a penny to download, but are rather driven by in-app purchases. They count on delivering an immersive and addictive experience to get you hooked. And once you are hooked, the game nudges you to spend money on digital goods within the in-game economy—weapons, costumes, emotes etc (if you know you know). Take-Two on the other hand owns some of gaming's biggest properties like GTA, Red Dead Redemption, NBA, all of which could potentially make their way into mobile phones as free-to-play cash cows.

And it's a tried and tested formula. Two of Take-Two Interactive's peers—Activision Blizzard and EA—both felt the need to acquire major mobile game makers to make inroads in this important market. Last year EA bought Glu Mobile and Playdemic for a total of ~\$3.8 billion. While Activision bought Candy Crush maker King back in 2016 for ~\$6 billion. So far, the bet has worked out quite well. King now brings in around 33% of Activision's total revenues.

Also, mobile phones are getting more powerful by the day. They already boast of an impressive capacity to run graphically intensive games and are increasingly becoming more of a portable gaming machine. And Take-Two's tango with Zynga doesn't just end at tapping into the limitless potential of mobile games. In extension, it also means getting a big break into blooming mobile-centric markets like India, China, and Africa. India for instance is the fastest growing gaming market in Asia, with annual revenues touching \$534 million in 2021. So yeah, this deal makes a lot of sense for both companies and we will have to see how the union benefits gamers across the world.

# Why isn't Tesla coming to India?

In today's newsletter, we see why Tesla is yet to make its debut in India



## Business

### *The story*

India is considered a sleeping giant in the global EV market. Not just because it is the fifth-largest auto market in the world, but due to its sheer potential. You have an aspirational middle class, you have a country that's trying to reduce its carbon footprint, you have cheap labor and access to raw materials and you have governments (state and central) that seem to finally realize the massive upside of adopting EV across the board.

So, it is not surprising that people often lament Tesla's conspicuous absence from the Indian market. It's the most recognizable brand in the ecosystem and yet, even after a decade, they are yet to make a splash in India.

But the absence though is not for lack of trying.

Tesla on its part has been teasing an entry since 2019. It has already registered a company in Bengaluru. It's hiring people in India. And as many as seven Tesla models have been deemed roadworthy by Indian authorities. Yet the cars haven't seen the light of day quite yet and if you're wondering what's the holdup, well, Tesla founder Elon Musk dropped a hint recently.

Responding to a tweet on the subject, Musk replied—"Still working through a lot of challenges with the government."

And this seemingly honest reply (or maybe it was well thought of), kicked up a major political storm. Several folks began pinning the blame squarely on the Indian government and what followed was almost a comical mad rush to get Musk's attention. Notably, ministers and politicians from at least four major Indian states sent out invites and made their pitches via quote tweets, beseeching the billionaire to come set up a Tesla plant in their respective state. They promised land, infrastructure, a streamlined approval process, and a lot more just to get him to consider their proposal.

And you could see why this may be tempting to the layperson.

Setting up a car factory in India is a gargantuan affair. You have to wade through tedious red tape, acquire land, abide by stringent labor codes and if the universe doesn't spring any surprises (think Tata Nano episode) you may finally have your factory.

And in most cases, it's almost impossible to do all of this without active government intervention.

However, Musk and the central government have been in talks for years and it's unlikely that the problem stems from this bit alone. If anything, he may be hinting at something else entirely. Something like Import duties.

He even said so himself, last July, while tweeting at a random Twitter user.

The tweet went—"We want to do so (launch in India), but import duties are the highest in the world by far of any large country! Moreover, clean energy vehicles are treated the same as diesel or petrol, which does not seem entirely consistent with the climate goals of India."

So, what's with our Import duties?

For starters, they really are some of the highest in the world. India currently levies a 60% tax when you import a car priced below \$40,000 and 100% for those priced above \$40,000.

In contrast, most western countries like US and Canada apply single-digit rates, with emerging markets like China and Brazil levying rates of 22% and 35% respectively. With the import duties as is, even the most basic Tesla model would cost upwards of ₹60 lakhs. Making it unaffordable for most Indians.

Now the government's position is that this move helps local car manufacturers. They believe that this will incentivize auto companies to "Make in India."

So why doesn't Tesla take a leap of faith and make in India?

Well, first off, Tesla doesn't want to set up a local production plant in India just yet. They would rather test the waters and see if India warms up to the idea of futuristic cars. Moreover, EV sales account for barely 1% of total vehicle sales in India right now and there is no indication that Tesla cars might work a miracle and fly off showrooms once they get here. And even if they did, it's not to say that the manufacturing facility will be a runaway success. India is a graveyard for US car manufacturers. Ford and General Motors have already exited India after investing heavily over the past couple of decades.



**VidyaVikas Education Trust's**

**Universal College of**

**Engineering**

**Kaman Bhiwandi Road,**

**Village Kaman, Taluka Vasai,**

**District Palghar-401208**

**Ph- 8007090722, 8407979167,**

**8007478659**

**website-**

**[www.ucoe.edu.in](http://www.ucoe.edu.in)/[www.univers](http://www.univers)**

**[alcollegeofengineering.edu.in](http://alcollegeofengineering.edu.in)**