



# Universal College of Engineering

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

Gujarati Linguistic Minority Institution

Accredited with **B+ Grade**  
in 1<sup>st</sup> cycle of accreditation by



## NAAC

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# CURRENT WAVES AN INITIATIVE BY EXTC DEPARTMENT MAGAZINE

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## **ELECTRONIX QUOTES**

**I DON'T THINK PEOPLE CHANGE; ELECTRONICS CHANGE, THE THINGS WE HAVE CHANGE, BUT THE WAY WE LIVE DOESN'T CHANGE.**

**- JUDY BLUME**

**IN THE DEVELOPED WORLD, WE ARE SURROUNDED BY ELECTRONICS - FROM THE COMPUTERS ON OUR DESKS TO THE SMART PHONES IN OUR POCKETS TO THE THERMOSTATS IN OUR HOMES TO OUR DATA IN THE VIRTUAL CLOUD.**

**- JOE KAESER**

**I THINK WE HAVE TO PICK UP SOME SECTORS WHERE WE CAN MAKE INDIA THE GLOBAL HUB IN THE ENTIRE VALUE CHAIN, AND THE MOST IMPORTANT SECTOR TO PICK UP SHOULD BE ELECTRONICS.**

**- CHANDA KOCHHAR**



## INDUSTRIAL AUTOMATION

# Laying the Groundwork for Digital-Signage Technology

Digital signage can double audience information retention and provides endless possibilities for all industries. This article takes an in-depth look at the technology, what's coming, and how to consider it for implementation.

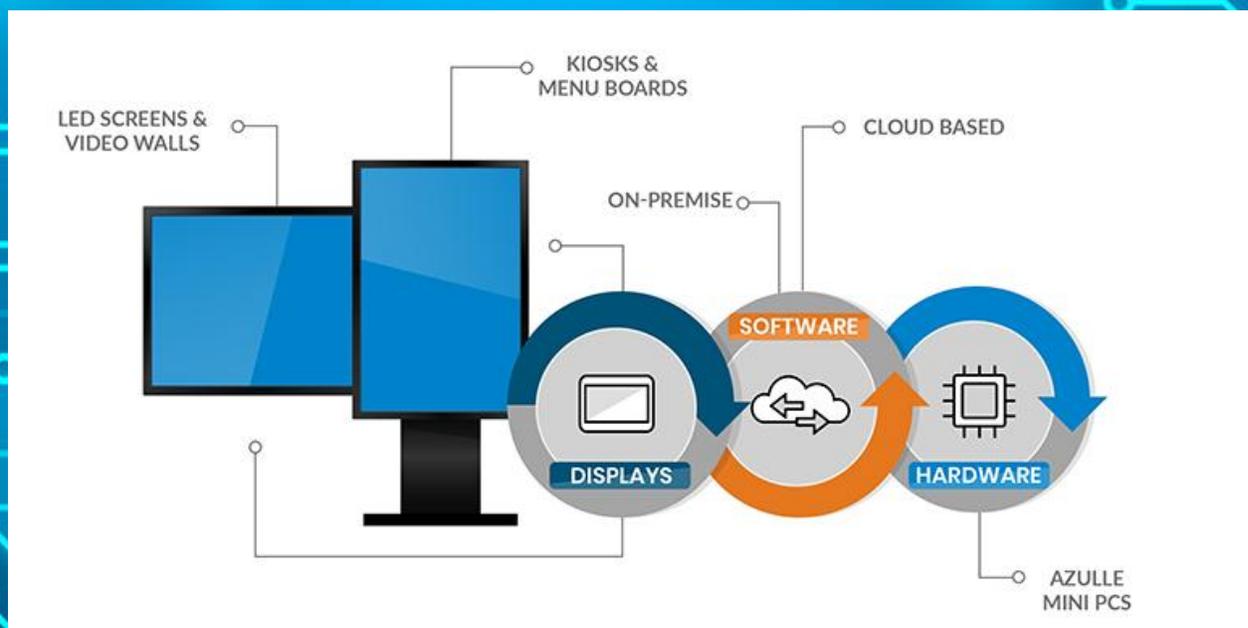
Restaurant menus, airports, hospitals, businesses: Communication via digital screen is all around us and the technology is only getting **smarter**. With an estimated 270 million Americans viewing their smartphones about 14 billion times per day, digital displays continue to prove their worth as consumers become ever more accustomed to receiving messages via device screens with instant access to information.

Not only that, but the advantages of digital signage over traditional signage include improved ROI, flexibility, and data collection.

For example, Volvo on “Auto Row” in New York City stood out from its competitors by using a video wall to draw in people from the street. Digital signage is now going beyond by using touch— interactive digital signage has the potential to go beyond engagement into the realm of immersion. Interaction turns passive consumers viewing messages into active participants in an experience.

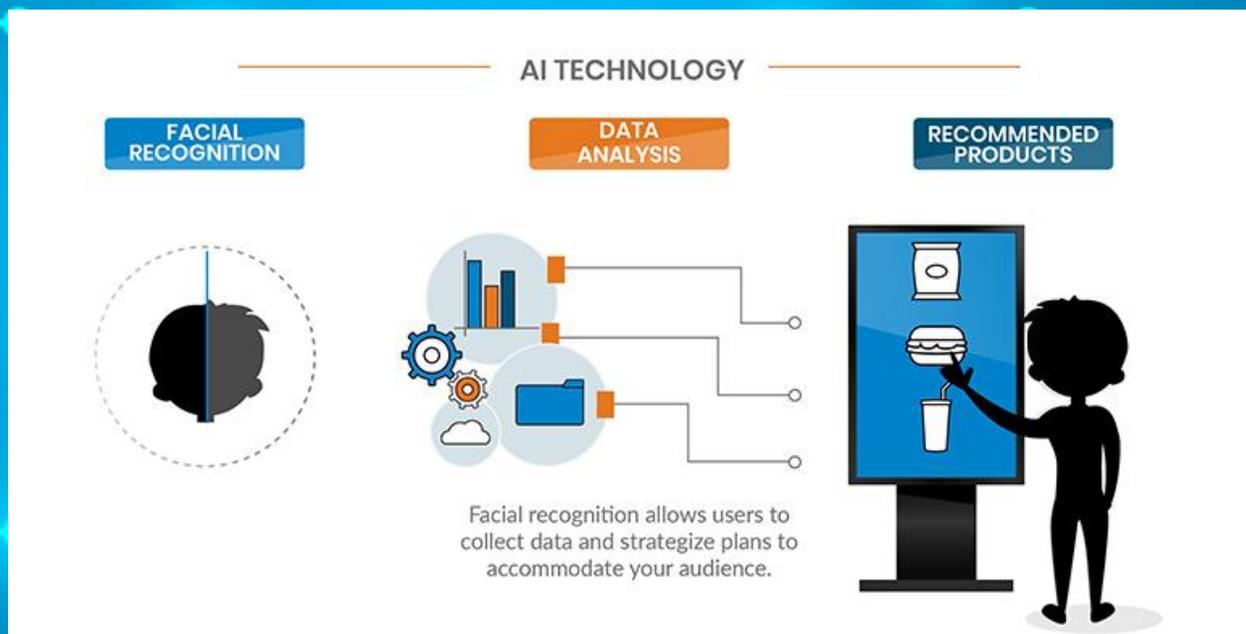
## What is Digital Signage?

Digital signage consists of three basic components: display, software, and hardware. The displays can consist of LCD screens, electronic billboards, menu boards, projection screens, video walls, kiosks, and many more this is where consumers will be viewing the content



## The Future of Digital Signage

An innovation currently being developed is the use of haptic technology. Haptic technology recreates the sense of touch when users interact with any piece of technology. Adding haptics to displays increases engagement and remembrance and is more cost-effective. The use of mid-air haptics integrated into displays will reduce maintenance and hygiene concerns because users will not have to physically operate the screen.



The integration of AI technology in digital signage adds a new dimension of personalized experiences, such as use of facial recognition and collecting data to help better strategize plans to accommodate their audience. Using data analytics is what really will make the investment worth it.

McDonald's recently acquired Israeli startup Dynamic Yield Ltd. to show food tailored by factors as time of day, weather, current restaurant traffic and trending menu items. It will also allow the chain to instantly suggest and display additional items to customers based on their current selections.



If the cloud-based route is chosen, up-front costs are lower and the data is stored elsewhere; therefore, on-site servers aren't needed. The software will always be up-to-date and when it comes to security there's access to the vendor's security infrastructure, so it could be even more secure than on-premises. Overall, when determining what solution to use, it's best to decide based on up-front costs versus monthly costs and support and flexibility versus maintenance. Another important consideration is noise. When using digital-signage technology, fanless technology ensures silence and long-lasting power for displays—something to think about depending how it's used.

# TECH BRIEFS

ENGINEERING SOLUTIONS FOR DESIGN & MANUFACTURING

## LASER World of PHOTONICS



Wandering through five exhibition halls filled with cutting-edge technology, you see a lot of lasers, optics, cameras, test & measurement systems, and production equipment. But just when you think you've seen it all, you occasionally come across something quite unusual and completely unexpected.

Take, for example, the **all-electric Formula Student** (aka Formula SAE in the US) race car on display in one of the Fraunhofer booths. Designed and built by students from RWTH Aachen University, the 200 kg (440 lb), 80 kw (107 hp) race car uses four conveyor belt motors — one on each wheel — to power the car. Whether its reason for being in the Fraunhofer booth was eye-candy to pull people in, or it was meant to showcase some of the company's technology wasn't clear, but it did attract a lot of attention.

**Department of Electronics & Telecommunication**  
organized  
Short Term Training Program  
on  
*Emerging Technologies in Embedded Systems and  
Robotics*  
from

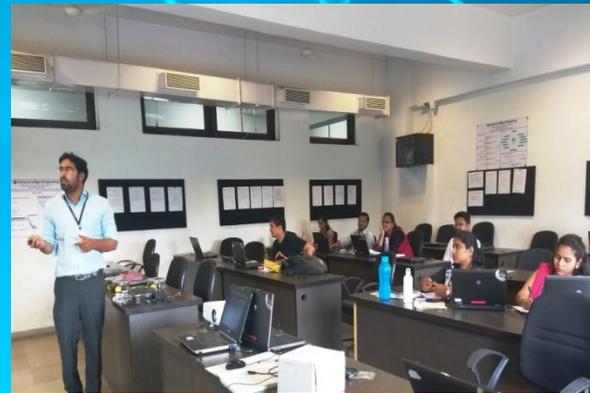
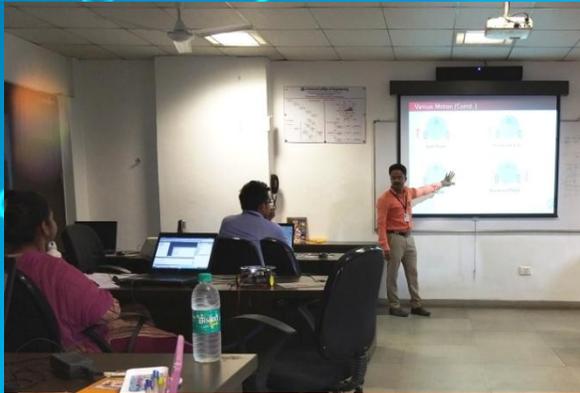
***17th-21st June 2019***

***About STTP***

Fire Bird V provides an excellent environment for experimentation, algorithm development and testing. Fire Bird V are being used in IIT Bombay to teach embedded systems and robotics. Its modular architecture allows to control it using multiple processors such as 8051, AVR, PIC and ARM7.

An ISTE (Indian Society for Technical Education) and ISA (International Society of Automation) approved short term training program was organized by Universal College of Engineering, Vasai from 17th June 2019 to 21st June 2019. The STTP was inaugurated by our Campus Director & Principal Dr. J.B. Patil and Head of Department (ETRX & EXTC) Prof. Kaveri Sawant. The participants were addressed and motivated by the Campus Director and encouraged them to upgrade their knowledge with various new technologies.

On the second day of the program a very informative session was conducted by Prof. Sandeep Dubey and Prof. Gaurav Shete. The session covered the simple motions of robot, various Interrupts used in ATMEGA 2560 and application to control the speed of motion of robot by PWM motion control. The session also covered the use of ADC.



Prof. D.S.Sawant from NMIMS conducted very informative session on Arduino controller programming with LabVIEW Environment. The session covered interfacing of Arduino UNO programming.



On day five session we got very valuable guidance by Dr. Kushal Takle from IIT Bombay on latest controllers used in Automation

Industries. The selection of controllers and application of controllers in Industrial automation is covered in the session.



## *Our students @ internship*

Myself Vishal Soni, I am doing internship at **J Group of Robotics**



at Mira road along with my friend Smit Parmar. We have studied about various types of 3D Printers such as Digital Light Processing DLP and Fused Deposition Modelling (FDM) 3D printers. Along with 3D printing we have also learned how to design an object

and generate its G code and print an object after printing we have done post processing of printed objects. We have also assembled FDM 3D printer and upload firmware. We have also performed Troubleshooting of 3D printers. Along with 3D printing we have developed many 3D printed objects like Lunar lamps, some components which are used by Indian Navy and some Jewelry designs which are printed by FDM and DLP 3D Printers



My responsibilities were to test the relay and make a report. Also we saw various types of relay and its working which need medium and high voltage, it's come under domain of embedded. We also worked on the project of "endurance test of circuit breaker", we tested it and made a manual of it. Apart from technical, we also learned discipline, habit of reporting, completing our work on time., how to behave, taking up challenges and responsibilities.

If task of day is not completed, we did overtime.

We all were scolded many times.

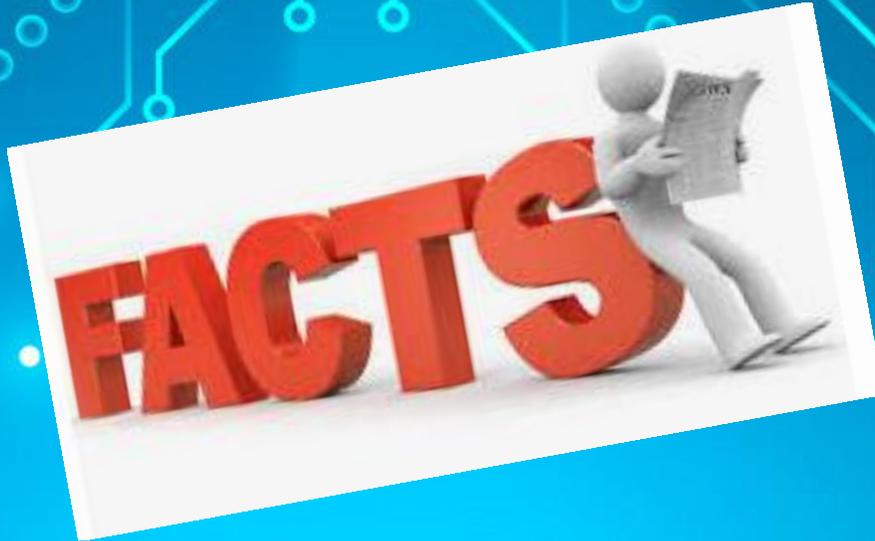
But yes, this summer was worth for us.

Sangita Paul

comment on **Stelmec Ltd** company internship

✚ More than **570** new websites are created every minute.

✚ Over **3.8 billion** people use the internet today, which is 40% of the world's population.



✚ There are over **3.5 billion** searches per day on Google.

✚ **Every minute 24 hours** of video is uploaded to YouTube. More video content is uploaded to YouTube in a 60-day period than the three major U.S. television networks created in 60 years.



- i. Which device allows your computer to talk to other computers over a telephone line as well as access the internet?
- ii. Brain of a computer system?
- iii. Unit of a computer system is the unit where place where the actual executions of instructions takes place during processing operation?
- iv. Which memory is a volatile memory?
- v. Wildcards in Windows?
- vi. When a key is pressed on the keyboard, which standard is used for converting the keystroke into the corresponding bits
- vii. Memory is made up of
- viii. Which device can understand difference between data & programs?
- ix. Primary memory stores?
- x. How do you clear CMOS password?

**ALL THE ANSWERS ARE PROVIDED IN NEXT EDITION OF CURRENT WAVES...**

*What is something that you read recently and is worth sharing?*

*Not all superheroes wear capes, Some wear sunglasses!!*



For a man who has won hearts for his noble work, the childhood was not easy.

Read the story till the end because it is worth it!

His respect for women grew when his mother started a catering business.

His father was diagnosed with knot in pancreas.

In his young age, he saw how his mother struggled with everyday challenge with a smile on her face.

He says "The way she brought us made us realize that every woman in this world deserve respect"

Lack of money made him to quit college.

He worked as office boy in computer manufacturing company.

After a lot of struggle, he got job at call center.

He paid off loans and moved from chawl at vile park to Malad.

Things started to become better.

On July 11th, 2006, Dipesh slept after his shift.

His mother waked him up and they saw images of train bomb blast.

Dipesh along with his brother helped injured for treatment.

Two brothers carried dead and donated blood.

Next day, he decided to start NGO "Youth for People" asked his colleagues to join.

They agreed.

Till 2012, NGO was focused on education, camps and blood donation for poor but Nirbhaya Gang Rape shocked Dipesh deeply.

He felt ashamed to be a man.

He made a promise to Nirbhaya that at least he will not let this happen to any women around him.

Sexual harassmt at railway station was a big problem.

One day he could not stay silent and stood up against a bunch of boys who were harassing women on train.

Dipesh went to railway police for action but they ignored him.

This did not make him stop.

He went to railway police complaining about goons.

In 2013, he started a campaign called "War against Railway Rowdies"

They made a survey and asked women if they feel safe.

85 percent of women confessed they did not feel safe.

They submitted the copy to railway police and finally got support.

40 constables were deployed at each station.

They showed to police about how goons showed visual gesture of masturbation and gave insulting comments to women on train.

Dipesh was beaten many times by those eve-teasers.

But he stayed strong and continued his mission.

He believes that "***If good people stay silent, bad people start speaking***"

He realized that his team members were often caught by eve-teasers while filming them..

So, he ordered sunglasses with inbuilt camera.

*All he does is wear those glasses and make the lives of eve-teasers hell*

He often says " When you do good work, universe protects you. Just stand up and do good work"

I felt so proud writing about him and his work.

Also read What is wrong with India?

**May God bless him with happiness for his immense contribution in making life of every women safe.**

## Yuvraj Singh

**Born:** 12 December 1981,  
Chandigarh

**Career end:** 10 June 2019

**Height:** 1.88 m

**Current teams:** Mumbai Indians  
(All-rounder), Punjab cricket team  
(All-rounder)

**Books:** The Test of My Life

**Last ODI:** 30 June 2017 v West Indies



### Yuvraj Singh stats

All-Rounder

#### Career Batting Stats

Left-Handed Batsman

Format	M	Inn	NO	Runs	HS	Avg	BF	BF	SR	100s	50s
Test 2003–12	40	62	6	1900	169	33.9	3277	203	58.0	3	11
ODI 2000–17	304	278	40	8701	150	36.5	9924	127	87.7	14	52
T20I 2007–17	58	51	9	1177	77*	28.0	863	35	136.4	0	8

#### Career Bowling Stats

Left-Arm Leg Spin Bowler

Format	M	Inn	B	Mdn	Runs	W	BB	Econ	Avg	SR	4W	5W
Test 2003–12	40	35	931	14	547	9	2/9	3.52	60.8	103.4	0	0
ODI 2000–17	304	161	5048	18	4294	111	5/31	5.10	38.7	45.5	2	1
T20I 2007–17	58	31	424	0	499	28	3/17	7.06	17.8	15.1	0	0

## *Admission Opens 2019-2020*



*Our campus boasts of spacious classrooms, state-of-the-art presentation equipment, an expansive library, intimate tutorial rooms, courtyards, hostel facilities, the literati cafe, and above all, the serenity of the environment around. The campus is purpose-built for higher education and allows for blending of outdoor learning with intensive indoor class work.*



**DTE Code: 3460**



Vidya Vikas Education Trust's

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**Gujarati Linguistic Minority Institution**

**Ranked No. 1 in INDIA**

for 4 Consecutive Years 2015, 2016, 2017 & 2018

**among Top Emerging Private Engineering Institutes**

by **TIMES ENGINEERING** An OMS Initiative with  
**THE TIMES OF INDIA**