

# CITY ENGINEERING COLLEGE



## Tech Samachar

*Expand your mind; change your world.....*

APRIL-2021

Volume I, Issue-01

*“Ideas are the beginning points of all fortunes”*



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Department Monthly Newsletter Issue-01

# **DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

## **VISION**

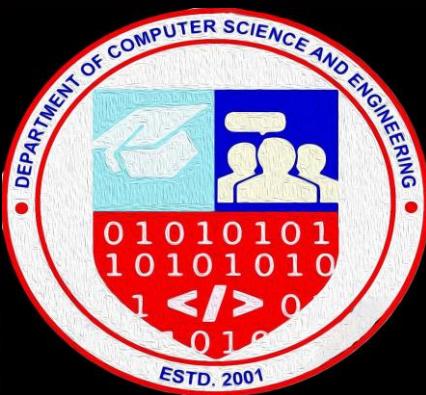
**“To contribute to Global Development by producing Knowledgeable and Quality professionals who are Innovative and Successful in advanced field of Computer Science & Engineering to adapt the changing Employment demands and social need “**

## **MISSION**

**M1: To provide Quality Education for students, to build Confidence by developing their Technical Skills to make them Competitive Computer Science Engineers.**

**M2: To facilitate Innovation & Research for students and faculty and to provide Internship opportunities**

**M3: To Collaborate with educational institutions and industries for Excellence in Teaching and Research.**



## *About the Department*

The Department of Computer Science & Engineering was started in the year 2001 is known for imparting Quality education and carrying out cutting edge research. In addition to the UG program, PG CSE program and Research facilities for Ph.D. The department offers undergraduate program and has a comprehensive curriculum on topics related to software and hardware with an emphasis on theoretical and practical learning. It has well equipped, state of the art laboratories supported by highspeed Internet and wireless networks.

The students of CSE Department deliver value to the department with a dynamic character and active culture towards learning and delivering through assigned projects guided by faculty. The faculty members are highly qualified experienced and dedicated. All faculty members are masters, some doctorates and few are pursuing their Ph.D. from various reputed universities. All are inspired in delivering top class education blending their research in the area of information technology. The infrastructure of the department provides the student and staff a conducive learning environment.

The Department regularly organizes industrial visits, conferences, workshops, technical talks, project exhibitions for the faculty and students training by using in-house resources as well as industry experts. This helps in effectively bridging the gap between academic and industry.

# **Editorial Committee**

## ***Faculty Members***

*Prof. Vivekavardhana Reddy, HOD CSE*

*Dr. Sowmya, Professors, CSE (Alumni)*

*Prof. Ambika P R, A.P. CSE*

*Prof. Deepika R, A.P. CSE (Alumni)*

*Prof. Archana Bhat, A.P. CSE*

*Prof. Laxmi M C, A.P. CSE*



## *Chairman's Message*

**Tech Samachar is particularly important as it encourages the students to share the knowledge they have acquired. Writing articles for the Newsletter also improves the communication skills of the budding engineers of the Computer Science and Engineering Department. It is common knowledge that representation of an idea is as important as, if not more important, than the idea itself.**

**Tech Samachar aims to inspire and nurture upcoming Engineers to bring a revolution in this ever-evolving world of Technology. The Newsletter captures the current Technological advancements.**

**To conclude I would like to congratulate the faculty and the students of the editorial team on bringing out the First Issue of Tech Samachar. I am glad to see that they have lived up to the high standards and my best wishes to the students for a bright future.**

**Dr K. R. Paramahamsa**

**Chairman, AMC – CITY – BROOKLYN – CAMBRIDGE Group of Institutions**



## *Principal's Message*

*Congratulations to the students and faculty associated to Newsletter committee for successfully publishing the First Issue of Departmental Technical Newsletter Tech Samachar. Tech Samachar is creating platform which provides an opportunity to the students and staff to express their original thoughts on Technical topics.*

*The Newsletter plays an important role in providing exposure to the students to develop written communication skills and command over the language. It is a step towards building professional and ethical attitude in them. The entire journey of creating Tech Samachar is an outcome of rigorous effort made by students and faculty. Students not only gain the knowledge about the latest technological developments and advancements through reading and writing articles but they also develop verbal and written communication skills.*

*On concluding note, I would like to thank all the stakeholders for their involvement and encouragement and wish All the Best for their bright future.*

**Dr. V. S. Ramamurthy**

**B.E(Mech), ME (Metal Casting), Ph.D. (Composites), MISQE, MISTE, FIE(India)**



## HOD's Message

***This is the First Issue of the Computer Science and Engineering Department Newsletter. Tech Samachar, this issue is particularly special to me as it was a challenge to live up to the standards. Tech Samachar is all about the technology that inspires students to do something, that leaves an everlasting mark on the world of Technology. Thus, it was our job to ensure inspiring technological developments are being brought to the students of CEC, by the students of CEC itself.***

***The work was performed in an organized, almost professional manner and credits to my entire Tech Samachar team, for their commendable job.***

***I would also like to Thank every member of the Tech Samachar team, without whose contribution, this issue would not have been possible. I hope you enjoy reading this Newsletter as much as I enjoyed working towards its creation and more importantly, I hope that the articles in this magazine inspire you.***

**Mr. Vivekvardhana Reddy**

**HOD, Computer Science and Engineering**



## Editorial

*At the outset, on behalf of the entire Computer Science and Engineering Department and all the readers we extend our whole hearted gratitude to our beloved Chairman, Dr. K. R. PARAMAHAMSA, to the honorable principal Dr. V. S. RAMAMURTHY, and also to our HOD, CSE Mr. VIVEKAVARDHANA REDDY for their dynamic, inspirational, enthusiastic contribution and motivation towards our department also boosting our confidence for the publishing of first Issue of the Monthly Newsletter TECH SAMACHAR. This technical newsletter named 'TECH SAMACHAR' signifies an giving out of current technical datum. Team 'TECH SAMACHAR' will always remain grateful for the massive support and interest shown by you all.*

*Computer Science and Engineering is an ever-expanding field and the power what technology holds today is definitely beyond one's imagination rendering impressive set of ideas and therefore, the current issue in your hands is the first Issue of the Newsletter themed as "Ideas are the beginning points of all fortunes". This inaugural Issue is full of exciting new technologies and Department achievements. This Newsletter is intended to be published once in a month. Lastly, quoting our special thanks to the departmental faculty members and also to all our team members without whom this Issue wouldn't have been possible. We hope all the readers will enjoy this issue as much as we enjoyed creating it.....Happy Reading!*

**AMBIKA P R**

**DEEPIKA R**

**A.P. CSE**

# CONTENTS

FACULTY	PAGE
Storytelling	1
Now Robots Can Fold Your Clothes Using "Artificial Intelligence"	3
Emerging AI for Smart Agriculture	4
Role of AI in Fighting / Filtering Fake News	6
The AI Factor in Combating Covid 19	9
STUDENTS	
Silent Sound Technology	11
Why Should Engineers Become Job Creators Rather Than Job Seekers?	13
ALUMNI	
What I would do differently in my early 20s?	14
ACHIEVEMENTS	
Students Achievement	17
Technical Crossword	19

# Storytelling



## Preamble

Stories are a natural part of our lives. We tell, read, and listen to stories every day — from listening to the news to recounting the events of the day. These stories are our way of remembering and communicating experiences. Storytelling is how we share ideas and experiences. Having raw data is not enough to convince teams and stakeholders of what needs to be done. A narrative makes a connection between our data and why other people should care about it. The effect of stories on human memory has been well documented by many psychology experiments.

The same applies to stories in user experience. When used to their full potential, UX (User-experience) stories create a shared vocabulary, add to the organizational memory, focus the team on a common goal, ignite the audience's imagination, and persuade stakeholders — ultimately leading to buy-in. A UX story is an account of events from the user's perspective; the events in the story show the evolution of an experience. Ultimately about knowing your audience and how to engage it.

## Using Story Telling



## Research and Strategy

Communicate stories through compelling research reports. You can incorporate imagery with relevant case studies, charts, and photos from usability tests to give your audience something to connect with beyond words.

## Product Management & Product Marketing

Storytelling skills for product management and product marketing are essential because without them, the value context (why the market cares) of what you're building, marketing and selling is completely masked. That mask is usually in the form of technical product jargon and/or a lot of superlatives (best-in-class, intelligent, actionable, optimized, etc.).

Take market requirements for example. Most market requirements documents (MRDs) lead off with a customer problem and why it occurs. Quickly followed by how pervasive the problem is in the market, and then the proposed solution.

## Leadership

With all of the tools available to leaders today, many are returning to a low-tech, old-fashioned, tried-and-true strategy that likely traces back to some of their earliest childhood memories. Want to lead? Start with a story.

When used properly it helps the leader to explain his ideas to his constituents, to share his

knowledge with them, to build shared vision and settle conflicts peacefully. Storytelling is the tool that addresses emotions of people not their rational mind. It has the potential to overcome barriers people build to protect themselves against the external world and new ideas.

## Branding

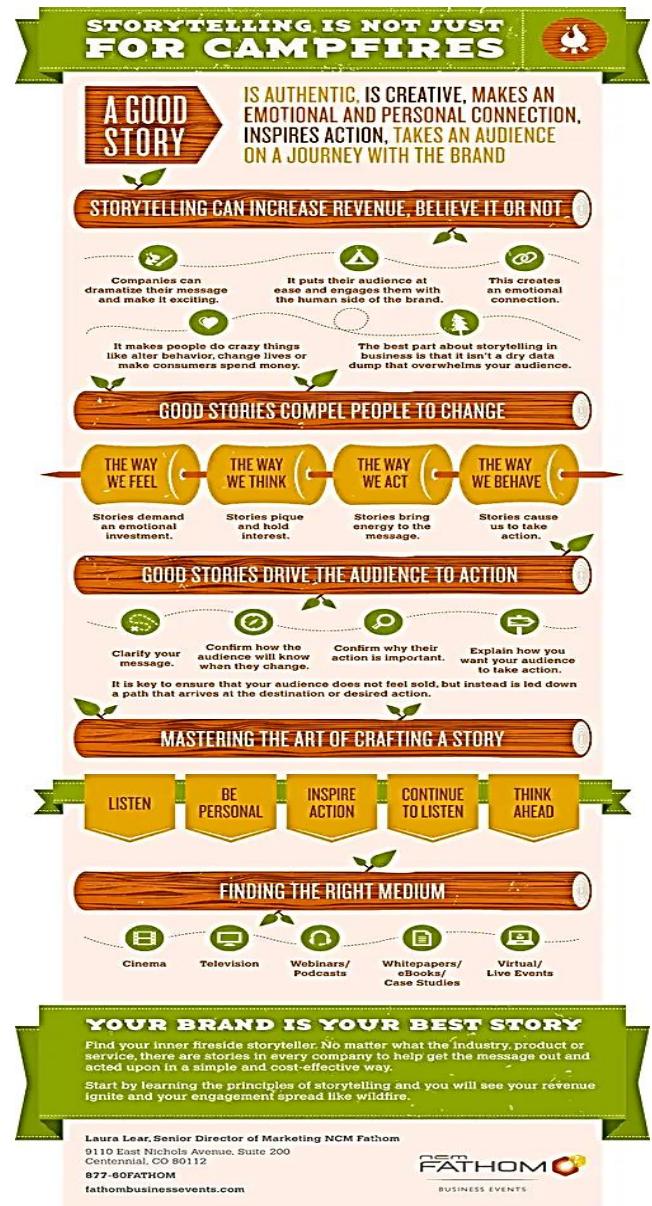
Storytelling is one of the most powerful ways to breathe life into your brand and often called one of the main components of a content marketing approach. By giving your products and services an identity by capturing and sharing the stories they really are, you can take your target audience on a journey they yearn to experience. In order for consumers to form a personal connection with your brand, company stories must be authentic, creative and inspirational.

Emotional branding is a progressive marketing strategy that has the potential to drive revenue and increase customer retention. How a person feels about your brand typically determines whether they buy your product. A brand is a matter of perception. When you tell a story that embodies human challenges, you create an experience that resonates with your customers.

## Software Development

Programming and storytelling are very similar in nature. For example, both are expressed via written language and are means of communication (either seen as a set of instructions to a machine or as code read by a colleague). Both have rules, best practices, techniques, and structure. How can a developer though, find value from studying storytelling?

In programming, there is a similar principle that is known as **Tell, Don't Ask** that aims to control coupling between classes. As a good storyteller is expected to show to the audience instead of directing telling them information, a software developer can also tell (command) its objects to behave as expected instead of querying them for their internal state.

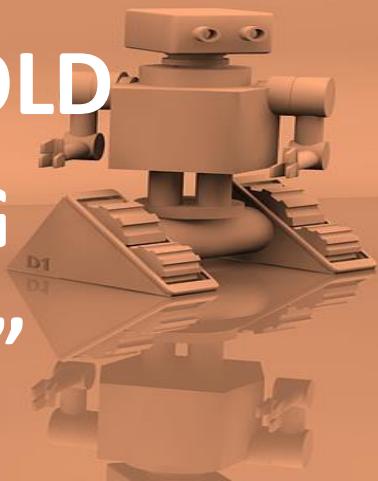


## Telling Stories on the Web

- Medium.com
- Storify.com
- Maptia.com
- Atavist.com
- Shorthand.com
- Steller.co (for mobile)

**Prof. Vivekvardhana Reddy**  
**HOD CSE**

# NOW ROBOTS CAN FOLD YOUR CLOTHES USING “Artificial Intelligence”



Artificial intelligence (AI) is a wide-ranging tool that enables people to rethink how we integrate information, analyse data, and use the resulting insights to improve decision making—and already it is transforming every walk of life. Fabric manipulation in particular has applications ranging from senior care, textiles, elderly care, surgery, sewing, ironing, bed-making and laundry folding to manufacturing upholstery and handling surgical gauze.

Advances in robotic manipulation of deformable objects have lagged behind work on rigid objects due to the far more complex dynamics and configuration space. However, prior work in fabric manipulation has generally focused on designing policies that are only applicable to a specific task via manual design or policy learning.

Researches from Berkeley have proposed a new system that can fold a few sets of fabric more accurately than before.



This work is a perfect blend of Robotics, Computer vision and Deep Learning where a robotic arm makes movements based from reading a RGBD camera

They have also proposed a new simulated dataset Fabric Corner Bias that can be used by researchers to provide improvements in Fabric Manipulation Tasks. They have also released a gym environment to train an RL agent that can do fabric manipulation effectively. For Robotic Arm Training, Inverse Reinforcement learning is widely used. The field is just starting to see huge improvements for Practical Applications. So, start exploring...

**Dr. Sowmya,  
Professor, Department of CSE**



*“As more and more Artificial Intelligence is entering into the world, more and more emotional intelligence must enter into leadership.”*

**Amit Ray, Famous AI Scientist, Author  
of Compassionate Artificial Intelligence**

# EMERGING AI FOR SMART AGRICULTURE

Agriculture plays a significant role in the economic sector. The automation in agriculture is the main concern and the emerging subject across the world. The population is increasing tremendously and with this increase the demand of food and employment is also increasing. The traditional methods which were used by the farmers, were not sufficient enough to fulfil these requirements. Artificial Intelligence in agriculture has brought an agriculture revolution. AI-based equipment and machines, has taken today's agriculture system to a different level.

## AI in agriculture-insight upfronts

**Agriculture robots** - An agricultural robot is a robot deployed for agricultural purposes. The main area of application of robots in agriculture today is at the harvesting stage. Emerging applications of robots or drones in agriculture include weed control, cloud seeding, planting seeds, harvesting, environmental monitoring and soil analysis.

The first development of robotics in agriculture can be dated as early as the 1920s, with research to incorporate automatic vehicle guidance into agriculture beginning to take shape.

Agricultural robots are increasing production yields for farmers in various ways. From drones to autonomous tractors to robotic arms, the

technology is being deployed in creative and innovative applications

**Crop and soil monitoring** - Artificial Intelligence in agriculture applications can be used for identifying potential defects and nutrient deficiency in the soil. The image recognition and annotation services can identify the defects through the images captured by the user's smartphone. The user is provided with various soil restoration techniques. AI in agriculture sector can be used for monitoring crop health and sustainability. For example, detecting the diseases, pests, and nutrition of the farms. Artificial intelligence algorithm can tell where the fertilizer is needed on the farm.

This can reduce the amount of fertilizer needed by 40%. The software can be used across various mobile devices. Low cost and accurate assessment of crop and soil health has long been key to a successful farm and agricultural economy.

Recent advancements in drone and satellite technology enable the acquisition of cost effective, timely and localized high resolution multispectral imagery of agricultural land. AI and machine learning offers the ability to recognize highly valuable patterns in this and similar imagery

**Predictive analytics** - The influence of climate change and its unpredictability, has caused majority of the agricultural crops to be affected in terms of their production and maintenance. Forecasting or predicting the crop yield well ahead of its harvest time would assist the strategists and farmers for taking suitable measures for selling and storage. While using the machine learning algorithms in connection with images captured by satellites and drones, AI-enabled technologies predict weather conditions, analyse crop sustainability and evaluate farms for the presence of diseases or pests and poor plant nutrition on farms with data like temperature, precipitation, wind speed, and solar radiation.

**Prof. Laxmi M C**  
**A.P CSE**



***The farmer is the only man in our economy who buys everything at retail, sells everything at wholesale, and pays the freight both ways.***

**– John F. Kennedy**



## 5 Ways AI and ML are Transforming the Agriculture Industry

### ❖ Scrutinizing Farm Data for Better Results

The agricultural land produces millions of data points every day, AI has made collection and analysing of those data points possible. Farmers are able to make informed decisions in time, it has been an age-old problem that has been solved through the application of AI.

### ❖ Weather Forecasting With AI

Forecasting has helped farmers into making accurate decisions when and how they should be harvesting their lands for better productivity. Seasonal crops rely heavily on forecasts as they can't be grown around the year, there is a specific time frame and weather conditions that the farmers have to adhere to.

### ❖ Precision Farming and Its Benefits

Precision farming is a sustainable agriculture culture technique that is being taken up by a lot of farmers, it has been touted as one of the century's greatest innovations. PF is a technology backed approach that observes and analyses farm lands to attain effective and efficient agricultural yield.

### ❖ Drones and Their Capabilities

Drones help give a more accurate view of the farm and spot problem areas on the land. Soil and land health are the major factors that affect the eventual produce, it is of grave importance that they are kept under check throughout

### ❖ Bots and Chatbots In Agriculture

The agricultural industry has sought after chatbots since they are more convenient and give out facts and instant solutions to farmer's problems.

# ROLE OF AI IN FIGHTING / FILTERING FAKE NEWS

We all have seen “news”, ads, chain messages. They are scattered with content supposedly selected for us: unreliable news, rumours, malicious texts try to divide communities, cities, nations and the world. Fake news is content created maliciously with the intention of misinforming people, generating more traffic to sites with scandalous headlines, or with extremely politically biased content. In general, these types of news try to deceive the consumer imitating the appearance of reputable sources such as newspapers, blogs, and even videos, generating damage to democracy and societies.

The most important example in recent years has been the US elections in 2016 where more than 146 million people were reached by content created by 470 Russian-backed accounts, these attacks plus the Cambridge Analytica scandal made the founder of Facebook declare to the Congress and explain these vulnerabilities.

Without going any further, in the recent election in Brazil, disinformation spread through different social networks, generating confusion among the followers of different candidates, further increasing the differences between opposition groups, and generating unnecessary violence in a democratic process. Even worse, at least twelve people have died in India after being falsely accused, through WhatsApp messages, of being children’s kidnappers.

The trouble begins when too much of information is shared through the internet – information that

needs more than a human mind to identify the fake enjoying the status like the original. In this realm, artificial intelligence and big data have emerged as potent tools to track news stories and identify fake news items playing the trick on the user.

A study published in the journal Science in 2018, shows how false news diffused faster than truthful news. An analysis conducted on hundreds of thousands of Twitter posts shows how as many as 126,000 rumours were spread over 3 million people. The study points that the speed and scope of this false news diffuse up to 100 times faster compared to real news. The researchers’ conclusion is that false news reached more people around the world than truthful news.

Social networks have created a lot of value, both for consumers and advertisers, generating platforms that connect friends, families, groups with common interests and diverse communities, but at the same time, these platforms have created massive distribution channels for malicious groups.

It is true that Facebook, Twitter, and Google are working on improving their platforms, but this effort is not enough to solve the problem. The question now is: can these companies by themselves regulate their content and platforms? Can technologies like AI help us solve this?

## CASE STUDY

Factmata, a London-based AI start-up hopes to solve this. Backed up by big names like Mark Cuban and Biz Stone they have been able to raise 1.6 million in funding capital. Since 2017, they've been working on cutting-edge technologies to detect false news. Using natural language processing and machine learning they are able to identify certain characteristics in texts such as credibility and quality. The semantic analysis performed on the text detects up to four dimensions:

- ❑ Hate speech and abusive content
- ❑ Propaganda and extremely politically biased content
- ❑ Spoof websites and content spread by known fake news networks
- ❑ Extreme clickbait content

These dimensions are finally taken into consideration to create a content quality score, which allows users to see clearly which sources and contents are more reliable. This does not mean defining what information is correct or incorrect, it means giving the users the necessary tools to be able to define it on their own, increasing the awareness and critical thought of each user.

Two different platforms will be launched to the market this year, with different objectives: the business platform designed for advertisers and advertising platforms allows analysing the content of multiple URLs to measure the risk of publishing ads on these pages. The main difference with current solutions is that it doesn't use a simple black/white-list, but analyses the context of the entire content, sentence by sentence. A platform focused on the news industry will soon be launched. Reporters and researchers will be able to use the platform to verify the quality of different sources of information through credibility scoring artificial intelligence.

## IS ARTIFICIAL INTELLIGENCE DRIVEN DATA VERACITY THE LENS ON MISINFORMATION?

Any news becomes a fake news if the information presented is incorrect or information doesn't represent facts that it is expected to carry. When it comes to information, it is also about assuring the veracity of information as it is about moving, processing and securing information. In short, fake news and information are more of a big data veracity issue.

When it comes to handling fake news, none have put a brave face than Facebook. With trillions of user posts, Facebook realized that manual fact-checking wouldn't do any good to solve the fake news problem. Facebook turned to artificial intelligence to arrest this problem. Artificial intelligence is being leveraged to find words or even patterns of words that can throw light on fake news stories.

Artificial intelligence is now looked upon as the cornerstone to separate the good from bad in the news field. That is because artificial intelligence makes it easy to learn behaviours, possible through pattern recognition. Harnessing artificial intelligence's power, fake news can be identified by taking a cue from articles that were flagged as inaccurate by people in the past.

As the volume of data grows bigger by the day, so is the chance of handling misinformation as it challenges the human ability to uncover the truth. Artificial intelligence has turned into a beacon of hope for to assure data veracity, and more importantly, identify fake news.

### HOW IS FAKE NEWS UNEARTHED?

As the world gets ready to tackle fake news, technology has set the trend by showing us how to identify fake news. Here are some ways leveraged to fight fake news.

#### 1. Score web pages

Scoring web pages is a method pioneered by the tech giant Google. Google takes the accuracy of facts presented to score web pages. The technology has grown in significance as it makes an attempt to understand pages' context without relying on third party signals.

#### 2. Weigh facts

To combat fake news, it is imperative to weigh facts that the news in context purports to share. Artificial intelligence is now at the core of ascertaining the semantic meaning of a web article.

For instance, an NLP engine can go through the subject of a story, headline, main body text and the geo-location. Further, artificial intelligence will find out if other sites are reporting the same facts. In this way, facts are weighed against reputed media sources using artificial intelligence.

### 3. Predict reputation

Even before eyeballs capture news items, knowing the reputation of the source sharing the news will do a world of good to nip fake news problem in the bud. The reference to The Wall Street Journal would raise no qualms about the reputation of this source. This becomes stronger when it is compared with another source that is unknown. It is now possible to determine the authenticity of a website. By creating a machine learning model, a website's reputation can be predicted, considering features like domain name and Alexa web rank.

### 4. Discover sensational words

When it comes to news items, the headline is the key to capture the attention of the audience. It is for this reason that sensational headlines become a handy tool to capture readers' interest. When sensational words are used to spread fake news, it becomes a lure to attract more eyeballs and spread the news faster and wider. Not anymore, as artificial intelligence has been instrumental in discovering and flagging fake news headlines by using keyword analytics.



## ARE THERE TOOLS TO COMBAT FAKE NEWS?

To combat negative forces, you will have to fight fire with fire and in this case, fight fake news with robust tools. French news media has already sprung into action by opening a fact-checking service to stop fake news items in their tracks. There are robust tools that have proved useful in debugging false news items. Forbes.com had given a summary of some tools used to fight fake news.

- Spike is a tool leveraged to identify and predict breakout stories as well as viral stories. The tool analyses mountains of data from the world of news and predicts what's going to drive engagement
- Hoaxy is a tool that helps users to identify fake news sites
- Snopes is a website that helps spot fake stories
- Crowd Tangle is a tool that helps discover social content early and monitor content
- Check is a tool from Meedan that helps verify news breaking online
- Google Trends proves its worth by watching searches
- Le Decodex from Le Monde is a database that houses websites that are tagged as 'fake', 'real' among others.
- Pheme has made a technology leap to read the veracity of user-generated and online content

We have not yet realized the true potentials of artificial intelligence in combating fake news. The future holds good for more sophisticated tools that harness the power of artificial intelligence, big data and machine learning to stop fake news making ripples in the user world. Technological platforms generated the problem, and technological platforms will correct it. Even so, algorithms are not enough to eradicate the underlying problem, and technology companies, media conglomerates, social networks, and even the state must make a greater effort to educate its users and inhabitants.

**Prof. Nandini S B**

**A.P. CSE**



# The AI factor in Combating Covid 19

Artificial Intelligence is such a technology, which can be used to fight in battle against deadly COVID-19 outbreak. AI is being applied and delivering results in Detecting, Predicting the virus and number of people affected, monitoring positive cases and survivals, precautions to be taken for Preventing, deploying robots to reduce further level transmission, Drug and Vaccine development to the present pandemic COVID-19. This AI driven solutions to COVID-19 includes the management of services and resources at healthcare centres. AI framework solutions incorporate screening, analysing and diagnosing the risk factor of a patient, prevent community transmission by employing robots at hospitals for different purposes like delivering treatment and monitoring patient, detect the cluster transmissions and avoiding them for further spread predict the future cases and keeping the track of current, recovered and death cases.

## SCREENING PROCESS WITH AI

COVID-19 can be diagnosed using built-in smartphone sensors. It is a simple and low-cost solution, since most of radiologists are using different gadgets for different daily purposes. Today with the advent of new technologies we can enhance the user interface and user experience using frontend frameworks, even an ordinary person can use their smartphones for the screening of early symptoms of virus detections. The mobile devices we use today are exceptionally powerful which uses advanced

processors added with neural processor units which is a combination of CPU and (control processing unit and graphics processing unit) which is an AI accelerator, embedded in the devices and used for screening of multiple diseases depending upon characteristics, processing and added with number of sensors including cameras, microphone, colour sensor, fingerprint sensor, humidity-sensor, wireless chipsets and proximity sensors etc., each of which has a functionality in collecting and detecting various symptoms for example camera and inertial sensors used for analysing images and neck postures to predict the headache level, microphone is used to detect type of cough and fingerprint sensor can be used to detect body temperature.

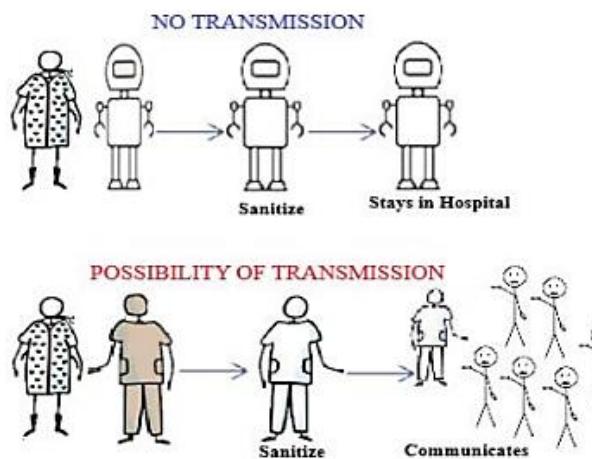
The Artificial Intelligence (AI) qualified framework reads the smartphone sensors signal measurements to predict the category of severity because it may vary from person to person and predict the best possible outcome of the disease.

## AI BASED ROBOTS IN FIGHTING AGAINST COVID-19

The robot-controlled noncontact ultraviolet (UV) surface disinfection has been used for disease prevention because COVID-19 spreads not only from Droplet transmission, which occurs when a person is in close or direct contact with person who has been suffered with respiratory problems such as coughing or sneezing and is consequently at risk of having his/her mucosae (mouth and nose) or conjunctiva exposed to potentially infective respiratory droplets.

(eyes) exposed to potentially infective respiratory droplets. One of the reasons for transmission is immediate environment around the infected person. Therefore, the community level transmission of coronavirus is not the only possibility for the spread of the pandemic. Another reason for the spread is unintended and partial contact with surfaces in the immediate environment or with objects used on the infected person for example stethoscope or thermometer. Coronaviruses can exist on inanimate surfaces—including plastic, glass and metal—for days, and UV light devices such as pulsed xenon ultraviolet have been proved to be efficient in diminishing contamination on frequently contacted surfaces at hospitals.

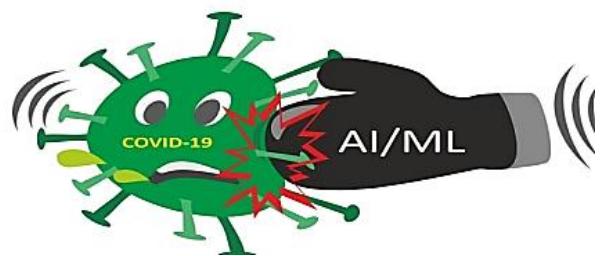
In order to reduce the human exposure to the pandemic especially in the case of manual disinfection, which requires labour force mobilization and increases risk to overcome this, cleaning personnel, independent or remote-controlled disinfection robots could lead to effective, fast and cost-effective disinfection.



For screening and diagnosis at public areas mobile robots can be used to screen multiple people concurrently. These mobile robots could also be used to monitor temperatures of in or/and out patients frequently in various areas of the health centres and hospitals with data linked to hospital database.

We are bound to use AI technology in possible

ways for rapid testing, implementing infrastructure for treatment.



The more possibility of reducing human contact the more prevention of spread is possible in present situation. The AI Driven Technology that is being used for self-screening at homes using smart phones by using advanced frame works, rapid diagnosis using AI enabled CT scan for accurate results, detecting symptoms like temperature at public places using thermal sensing devices, how robots are used at hospitals for treatment, delivering food and sanitizing surfaces and artificial intelligence is being used as a potential source for drug discovery with the help humongous amount of medical, molecular, public and private data collected.

Further this technology can be enhanced not only in detecting COVID-19 but also other communicable viral diseases. This technology has the potential to tackle without the intervention of humans and likewise diseases can also be contained in future.

**Prof. Sangeetha Rao**  
**A.P. CSE**

# Silent Sound Technology

Everybody has the experience of talking aloud in the cell phone in the midst of the disturbance while travelling in trains or buses. There is no need of shouting anymore for this purpose. 'Silent sound technology' is the answer for this problem.

The Silent sound technology is an amazing solution for those who had lost their voice but wish to speak over phone. It is developed at the Karlsruhe Institute of Technology and you can expect to see it in the near future. When demonstrated, it seems to detect every lip movement and internally converts the electrical pulses into sounds signals and sends them neglecting all other surrounding noise. It is definitely going to be a good solution for those feeling annoyed when other speak loud over phone.

'Silent Sound' technology aims to notice every movements of the lips and transform them into sounds, which could help people who lose voices to speak, and allow people to make silent calls without bothering others. Rather than making any sounds, your handset would decipher the movements your mouth makes by measuring muscle activity, then convert this into speech that the person on the other end of the call can hear.

So, basically, it reads your lips. This new technology will be very helpful whenever a person loses his voice while speaking or allow people to make silent calls without disturbing

others, even we can tell our PIN number to a trusted friend or relative without eavesdropping. At the other end, the listener can hear a clear voice.

The awesome feature added to this technology is that "it is an instant polyglot" I.E, movements can be immediately transformed into the language of the user's choice.



This translation works for languages like English, French & German. But, for the languages like Chinese, different tones can hold many different meanings.

This poses Problem said Wand. he also said that in five or may be in ten years this will Be used in every day's technology.

Thus, Silent Sound Technology, one of the recent trends in the field of information technology implements" Talking Without Talking".

- ⊕ It will be one of the innovations and useful technology and in mere future this technology will be used in our day-to-day life.
- ⊕ ‘Silent Sound’ technology aims to notice every movements of the lips and transform them into sounds, which could help people who lose voices to speak, and allow people to make silent calls without bothering others.
- ⊕ Rather than making any sounds, your handset would decipher the movements your mouth makes by measuring muscle activity, then convert this into speech that the person on the other end of the call can hear.
- ⊕ So, basically, it reads your lips. Silent Sound Technology, one of the recent trends in the field of information technology implements “Talking without Actually Talking”. Engineers claim that the device is working with 99 percent efficiency.
- ⊕ It is difficult to compare SSI technologies directly in a meaningful way.
- ⊕ Since many of the systems are still preliminary, it would not make sense, for example, to compare speech recognition scores or synthesis quality at this stage.



**KRUPA D**  
**7<sup>th</sup> SEMESTER ‘A’ SEC, CSE**

## Current Industry Trends

- ✓ Cyber Security, Transparency & Privacy
- ✓ Edge, Fog & Cloud Computing
- ✓ Artificial Intelligence
- ✓ Human Augmentation & Extended Reality (XR)
- ✓ Network & Connectivity
- ✓ Advanced Robotics
- ✓ Internet of Everything
- ✓ Digital Twin
- ✓ Additive Manufacturing
- ✓ Big Data & Analytics

## Top personality.....



**Elon Musk ,CEO and Chairman, Tesla**

Elon Musk is working to revolutionize transportation both on Earth, through electric car maker Tesla - and in space, via rocket

# Why Should Engineers Become Job Creators Rather Than Job Seekers?

The total population of India is somewhere around 139 Crores and according to a recent survey, there are 9% of people “Unemployed” that is out of 139 crores of people 12.51 Crores of people don’t have any “JOBS” and every Year 80% of the total engineers passed are going Jobless!!!!

## BUT WHY?

That's only because Students think Jobs are more Secure than that of Business and they fell into the traps of Companies providing Placement's trainings behalf of huge fees with no Job Guarantee!! No Student thinks of investing the same amount of fee into a small start-up as they feel its waste of time as well as money.



A student can find many such placement training companies but will not be able to find a company that teaches to Start a company, that's where the System goes WRONG!! And Students fail to think of any such ideas.

Even parents support their Children for seeking Jobs rather than Business because of the same mentality and attitude. Hence people blindly follow other's view to seek Jobs and end up unemployed, So the only way to change the system is to

**"YOU BE THE CHANGE FIRST"**



**NISCHAL KOTHARI M**  
**7<sup>th</sup> SEMESTER 'A' SEC, CSE**

## Did You Know?

### Did You Know ?



Global Organization Of  
Oriented Group Language  
Of Earth

### Did You Know ?

#### COMPUTER



Common Oriented Machine  
Particularly United And Used  
Under Technical And Educational  
Research

### Did You Know ?

#### VIRUS



Vital Information  
Resources Under  
Seize

### Did You Know ?



Wide Interactive Network  
Development For Office Work  
Solution

# What I would do differently in my early 20s?



In your 20s, it is realistic to think that you have ample amount of time and freedom to pursue your goals and start to “settle down” – getting a real and secure job, buying a house, have a family of your own, and all the things that you wish and choose to do! Now, in my late 20s, I always have this feeling “I wish I had started doing some things earlier”, “I wish I knew this earlier”, I wish .....!!

Needless to say, my early 20s were amazing, but life is filled with some regrets. When I talk to people of my age about this, they have no difficulty in coming up with a huge regret list! As we progress in every milestone of our lives, we look back and wish we had made better choices in some instances, isn't it?

Would I have done some things differently? Yes and No! I absolutely love my job and my workplace, and I wouldn't change the steps and decisions I took to get there! But there are some things I wish I started earlier! After all, we are all a work in progress and hence, we pick up and build ourselves in every stage of life.

Through this write-up, I wish to give you 5 seeds of thought that you might want to plant within yourself, grow it, and create a beautiful garden internally!

## **Spending time with family**

You will be surprised with how your life will quickly change when you graduate, start working, and march towards your life goals.

There are hurdles and milestones that you will cross one after the other so swiftly, within a blink of your eye. Throughout all these life's events, the individuals who you consider your family (parents, siblings, near and dear ones) are the only people who stick with you. They are your only CONSTANT with this changing world! Spending time with family is the first seed all of us should plant in ourselves.

Your parents are your first role models – start by observing how much they handle day in – day out, whether it's multitasking between office and house related tasks, financial management, taking care of you, your siblings, elders at home, and the list never ends! Have you ever thought that you might also go through what your parents are doing now? Similarly, have you thought how much your sibling might look up to you for support?

***Food for thought – Are you spending the required time with your parents, siblings, and other nears and dears?***

## **Upgrading your skillset!**

With the world accelerating at a frenetic pace, it is important that you keep upgrading your skillsets to stand out in the crowd. Artificial Intelligence, Machine Learning, Internet of Things, Augmented Reality, Edge Computing, Block Chain, Cybersecurity, Creative Thinking, Innovation, Design Thinking are some of the technologies and soft skills that all of us should learn about.

All of us have milkmen delivering every day, have you thought that it might be a drone/robot delivering supplies to us in near future? Did you know that a little pink robot named Geoffrey is used for food delivery in Toronto?

Apart from using the Book-Paper-Forget technique, go ahead and start questioning your curiosity! How does Siri, Alexa, Google Assistant work? Start with simple topics every day and you will be astonished to know how much advancements there has been in technology!

**Food for thought** – How updated are you as a graduand?

### Learning the art of saving!

This is one of the most important skill I wish I had learnt earlier! We have our parents and guardians who look after our needs! How many of you receive pocket money and save a nominal amount of the money? In our early 20s, we have little to no idea about the words - TAXES and SAVINGS!

Knowing how to manage your money is a skill to start learning from now! Start having conversations with your parents/guardians on how they manage their income, taxes, and savings! Start by saving a nominal amount of your allowance! You'll thank yourself later for starting to imbibe the habit of saving earlier in your life!

**As the Legendary Warren Buffet so famously put it – Pay your bills, Save, and then Spend.**

**Food for thought** – Are you aware of how to manage your income when you have one of your own? Are you responsible when it comes to spending money?

### Getting disciplined! Living an active lifestyle!

Being on your phone in the night and waking up late? Studying when the deadline is near? Finishing assignments in a hurry? Over-burdening yourself at the last-minute? Not finishing tasks on time?

These are the habits that each one of us have in our early 20s. Trust me, the last-minute jobs do not work when you turn into a professional.

Start disciplining yourself right away! Start small by simply making your bed, sleeping on time, waking up early, helping with daily chores, going out for a run or walk, eating healthy, organizing and breaking up your tasks, doing one task at a time! Go slow and you'll eventually get there!

**Food for thought** – What are you doing wrong that you should stop doing? What are you not doing that you should start doing?

### Knowing yourself!

Are you spending time with yourself? By that I mean, do you spend time alone with yourself, without the presence of any electronic gadgets?

Studies show that the ability to tolerate alone time is linked to increased happiness, less depression, and better stress management! Spending lone time helps you know yourself better, regulate your emotions, improve your creativity and confidence, build mental strength, build better social interactions, and much more.

Take some time out in the day to detach yourself from electronic gadgets and dig down deeper into yourself. Read books to upgrade your knowledge! Meditate for few minutes to channelize your inner energy! Trust me, you will see a new you and you will be surprised to see how you are handling yourself.

better in challenging situations! Additionally, getting to know yourself will also implant the sense of responsibility within you!

**Food for thought** – How much time are you spending with yourself in 24 hours? How much are you addicted to social media and electronic gadgets? Are you able to discover who you are based on your character and not by the unwanted attention from social media?

Now, these were some of the 5 things I would have done differently if given a chance. Nevertheless, you're better late than never! A seed needs continuous attention! A plant is not grown in a day but only by continuous effort and determination! Just like how Rome was not built in a day, it takes time to build a greater you! To start something is important but to keep repeating it shapes us to become who we are!

*We are what we repeatedly do. Excellence, then is not an act, but a habit. – Will Durant*



**Madhuri Dwarakanath**

**Technical Content Developer at Dell Technologies Inc**

**BE Batch – 2010 to 2014**

**MTech Batch – 2014 to 2016**

**Connect with me at – madhuri19.md@gmail.com**

## **Handy recruitment tips for Freshers.....**



Interviews are no rocket science and can be cracked with some wit and skill. In fact, interview skills are among the foremost things that even the smartest of job seekers need to be aware of.

### **1. Keep your resume short and crisp'**

Highlight the skills that the respective job profile requires and get multiple versions of the resume ready.

### **2. Curate your online presence**

Maintain your LinkedIn profile even if you do not have a prior work experience. It comes to your aid in more ways, as other companies will be able to find you for off-campus placements.

### **3. Research about the company**

You should explore and find out the basics like inception of the organization, its primary work, its market value etc. before appearing for an interview to get that brownie point!

### **4. Study the past trends**

Get in touch with your college's placement cell so as to get an idea of these trends and the competition you would be facing, and prepare yourself better for it.

### **5. Maintain a balanced attitude**

Whether you are appearing for your first job or are a decade into your professional journey, always remember to strike a fine balance between professionalism, confidence, and modesty in your attitude while sitting for the interview.

### **6. Don't be afraid of rejections**

It is completely okay if you do not get selected in some of these interviews. Feeling low during such times is quite obvious, but try not to take these rejections to your heart.

# ACHIEVEMENTS

“The only way to learn a new programming language is by writing programs in it.”

- Dennis Ritchie



**"9DaysOfCodingInC@CEC"**

**Congratulations!!!**  
**Congratulations!!!**

**Winners**

1. VENUGOPAL D      2. DEEPAK KUMAR      3. VIVEK GOUTHAM  
I sem 'C' sec            I sem 'C' sec            I sem C' sec



# ACHIEVEMENTS



"To get to know, to Discover, to publish- this is the destiny of a Scientist" -Francois Arago



*Congratulations!!!*  
*Condlaftuiafionz!!!*

Presented paper at National conference NCAIT-2020 with title "Contactless Attendance Marking System with Thermal Screening Using Arduino" under guidance of Prof. Archana Bhat.

VAMSINANDAN B S  
V sem 'B' sec



Prof. ARCHANA BHAT  
A. P CSE



# TECHNICAL CROSSWORD-1

## Across

2. A device that feeds data into a computer, such as a keyboard or mouse.
5. The exclusive right, as recognized separately in each country, to publish and sell literary, artistic, or musical materials.
10. A software system that links topics on the screen to related information and graphics, which are typically accessed by a point-and-click method.
11. copy (data) from one computer system to another, typically over the Internet.
14. Usually consists of eight bits.
15. A measure of the amount of computational work that a computer system performs.

## Down

1. Usually comprises the display device, circuitry, casing, and power supply.
3. An error, flaw, failure, or fault in a computer program or system that causes it to produce an incorrect or unexpected result or to behave in unintended ways.
4. A client software program that runs against a Web server or other Internet server and enables a user to navigate the World Wide Web (WWW) to access and display data.
6. The collection of physical parts of a computer system.
7. Sending an email, posting photos on a social media site and using your webcam.
8. A part of a computer system or network that is designed to block unauthorized access while permitting outward communication.
9. The combination of typeface and other qualities, such as size, pitch, and spacing.
12. Any computer-generated information displayed on screen, printed on paper or in machine readable form, such as disk and tape.
13. A word or group of words that act as a way to cross reference to other documents or files on the computer.

