



IEEE APSIT
Student Branch

Issue #2 : August 2020 Newsletter

COMMUNIQUÉ



*Local
Heroes*
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Articles
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A Dialogue



CONTACT US !!!

Mail us your articles, queries, suggestions or questions and get a chance to be featured in the next issue!

Email : ieeeapsit@gmail.com

Instagram : [ieeeapsit](#)

DR. SAMEER NANIVADEKAR **IEEE APSIT PES CHAPTER ADVISER**



When I was first approached by my students that they wanted to officially start an IEEE branch in our college I was first sceptical of its benefits to the students and our institute. We always had some IEEE members in our college but we did not have an official branch so I was intrigued to know how having a branch could prove more beneficial.

But just under one month after inaugurating our branch I was cleared of any doubts that I might have had.

Our institute is a non-profit organisation that has always put the needs and well being of our students first. So we always encouraged them to participate and organise grand events calling distinguished persons from varying industries, professions, universities, etc and **Our students have always been proactive** in doing so.

But in the very first couple of months itself, our IEEE team organised over half a dozen extravagant events inviting top scholars and even trainers from Google to give talks and conducting week-long events to educate over 300 students all over India and South-East Asia in ML, Blockchain and App Dev.

The sheer size of these events and the level of sophistication that was brought in by IEEE was very impressive. These grand events not only helped the students but also encouraged them to join IEEE and organise their own events like creating an online portal where underprivileged students can practice preparing for competitive exams like MHT-CET, JEE, GRE, etc. Our college has also started an internship program so our students are industry-ready after their degree.

I am proud of all my students and am particularly glad that this initiative which was started over 9 months back has ushered our institute into a higher league.

EVENTS

Past Events

Looking at the absurd amount of layoffs students are sceptical of their future within industry so we decided to lend them a hand

TALKSERIES 1.0 - CHAT WITH A GOOGLER

With a view to connect our members with industry professionals working in all sorts of domains, to get their guidance and learn from their mistakes, we launched TalkSeries 1.0, an interview series. The first interview session was with Mr Aditya Varshney, a software engineer at Google, where he talked about his journey from IIIT Allahabad to working for giants like Google, Flipkart and Morgan Stanley. He also gave advice on cracking interviews, coding and other stuff.



INTRODUCTION TO CLOUD COMPUTING

Mr Mandar Chawathe, a principal cloud solution architect at Microsoft USA, gave a detailed description of cloud computing as a career in the first of two collaborative efforts between IEEE APSIT and APSIT Skills. He also spoke of his starting out days and fielded various questions from the audience in this fun webinar.



Ask APSIT

Q.1. What is copyright?

Ans : Copyright is one of a group of intellectual property rights (or laws) that are intended to protect the interests of an author or copyright owner. In other words, these laws give an author/owner nearly exclusive control over the use of his/her work.

Q.2. Does IEEE consider authors posting their papers on preprint servers or on their companies' websites to be a form of prior publication, which may then disqualify the papers from further editorial consideration?

Ans : No. IEEE policy allows authors to submit previously posted papers to IEEE publications for consideration as long as authors are able to transfer copyright to IEEE, i.e., they had not transferred copyright to another party prior to submission.



CONTACT US !!!

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Ask APSIT

Q 4. What is the difference between copyright and trademark?

Ans : Copyright rights protect the particular expression of an idea, not the idea itself.

Trademark and service mark refer to rights meant to protect a name, title, or logo or other identifier of an entity, a service, or a product.

Where copyright rights are nearly exclusive, trademark laws grant fully exclusive rights to the owner.

Q 5. What is "Fair Use"?

Ans : Fair Use refers to a set of ideas or concepts intended to limit (under specific circumstances) the near-exclusive rights of the copyright owner.

However, because Fair Use is a doctrine and not a fixed body of laws, no generally applicable definition is available.



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EVENTS

WEBINAR ON AI AND MACHINE LEARNING



PARSHVANATH CHARITABLE TRUST'S
A. P. SHAH INSTITUTE OF TECHNOLOGY, THANE
(ALL PROGRAMS ACCREDITED BY NBA)

APSIT
Skills
We Set Trends

with
IEEE APSIT Student Branch

17th July, 2020, Friday
at 6.00pm



Guest Speaker : **Mr. Param Singh**

He is a Data Scientist at Microsoft USA, in Customer Success, with a focus on Data Science, Advanced Analytics and AI. Experienced Senior Manager and Enterprise Software Architect.

Topic : **AI and Machine Learning**

Who Can Attend : Students and Faculty

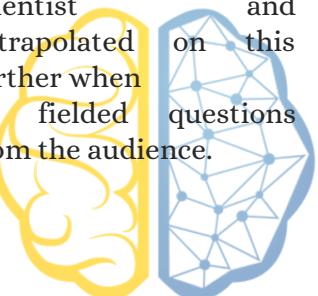
Register at bit.ly/MicrosoftAI-ML

@apsit_skills

/APSIT SKILLS

In the second collaboration between IEEE APSIT and APSIT Skills, Mr Param Singh, a data scientist at Microsoft USA gave an overview of artificial intelligence and machine learning, with focus on data science.

He explained various positions for a data scientist and extrapolated further when he fielded questions from the audience.



OPPORTUNITIES AND CHALLENGES IN SPACE

Two RF/Microwave engineers at NASA's Jet Propulsion Laboratory, Dr Rohit Gawande and Dr Chaitali Parashare, will join us from California to talk about the challenges of space exploration and the role of engineers in it, with a special focus on challenges for women in a male-dominated tech industry, in the third collaborative effort between IEEE APSIT and APSIT Skills.

IEEE APSIT Student Branch **APSIT Skills**
OPPORTUNITIES AND CHALLENGES IN SPACE

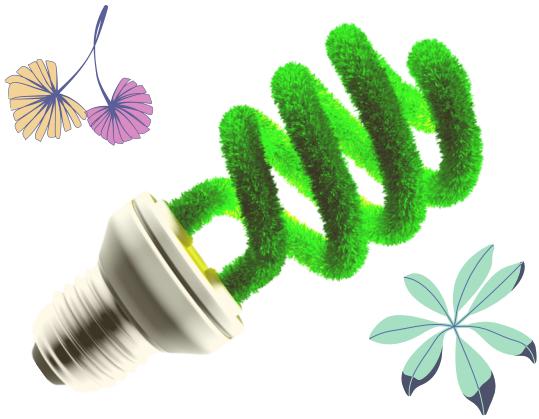
DR. ROHIT GAWANDE
RF/ MICROWAVE ENGINEER WITH NASA JET PROPULSION LABORATORY (JPL)

DR. CHAITALI PARASHARE
RF/ MICROWAVE ENGINEER WITH NASA JET PROPULSION LABORATORY (JPL)

DATE: 10TH AUGUST 2020 **TIME:** 10.00 AM **PLATFORM :** bit.ly/NASA-ExplorationOfSpace

EVENTS

RENEWABLE ENERGY IN INDUSTRY 4.0



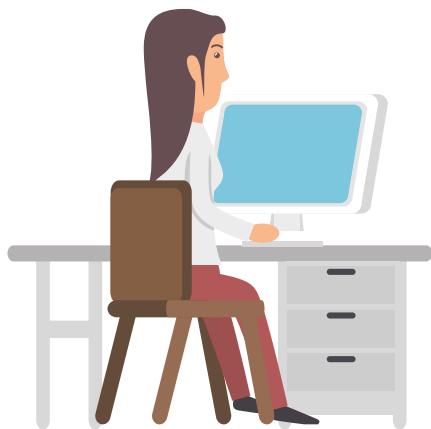
The promotional graphic for the webinar features a background image of a large, curved solar panel against a blue sky with clouds. At the top left is the logo of the Power & Energy Society (PES) IEEE APSIT Student Branch Chapter. At the top right is the IEEE APSIT Student Branch logo. In the center, the title "RENEWABLE ENERGY IN INDUSTRY 4.0" is displayed in bold black letters. To the right of the title is a circular portrait of Dr. Chetan Singh Solanki, a smiling man with dark hair, wearing a light-colored shirt. Below the title, a box contains the text "Dr. Chetan Singh Solanki" in bold, followed by a smaller description: "Solar Man of India. Professor at the Department of Energy Science and Engineering, IIT Bombay. An Educator, Innovator, Researcher, Entrepreneur, Author and Philosopher, known for his remarkable work in solar sector." At the bottom left, the date and time "1ST AUGUST, 2020 | 6 PM" are listed, along with the meeting platform "MEETING PLATFORM : GOOGLE MEET" and the link "bit.ly/RenewableIndustry4-0".

The Solar Man of India, Dr Chetan Singh Solanki, talks about the need for renewable energy, what it looks like in India and its crucial role in Industry 4.0, in this webinar organised by our PES chapter.

Upcoming Events

With an aim to diversify our events, we are planning various hands-on workshops and some fun activities along with the usual sprinkling of exciting webinars!

Xtreme Overflow

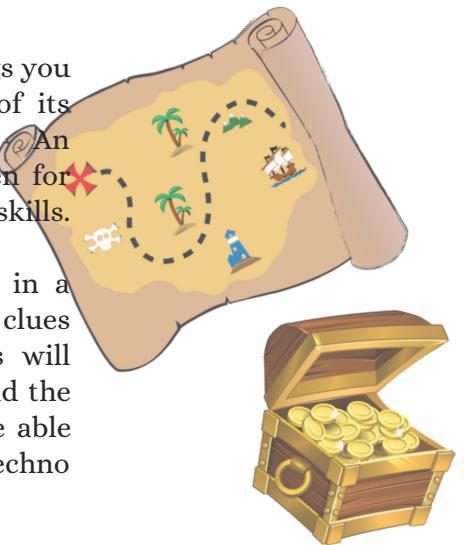


We join hands with the SBs of Sardar Patel Institute of Technology, Thakur College of Engineering and Technology, Vidyalankar School of Information Technology and Bombay Section SSC for a coding workshop-cum-contest, meant to be a launchpad for IEEEXtreme, starting from the third week of August.

Techno Quest



IEEE APSIT WIE AG brings you a digital treasure hunt of its kind, Techno Quest! An exciting competition open for all to test their cognitive skills. The participants will endure in a fun game of searching for clues digitally. The participants will be taking a small quiz and the top 20 contestant will be able to be a part of the Techno Quest!



ACHIEVEMENTS

Our Pride

Our chests are puffed with pride as we present to you the members from our IEEE APSIT family who went the extra mile to achieve great success outside their duties in the branch



PRANAV GHAG

IEEE PES Global Student Congress 2020
Selected as Student Branch Representative



Local Heroes

Kharhgar teenagers come to the rescue of stray dogs

Since the first week of July, a small group of animal lovers in Kharhgar has been combing the streets in their area everyday at 8 a.m. to feed as many stray dogs as they can.

The twin dangers of rainfall and lockdown is especially hard for stray dogs, and this college-going group of two boys and a girl wants to make it as easy for them as possible.

They regularly give updates of their activities and ask for donations via their Instagram and Facebook page ([@officialstreetdogsfeeder](https://www.instagram.com/@officialstreetdogsfeeder)). The trio shells out ₹100 everyday owing to the lack of donations.

However, the satisfaction that they get makes up for it.
If you wish to donate to them,
Google Pay at 7666602888 or
Paytm to 81040 25362



CONTACT US !!!

Are you deeply involved in helping your local community or know anyone who does?
Get a chance to have your work published in our newsletter!

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Instagram : [@ieeeapsit](https://www.instagram.com/ieeeapsit)

Genome Sequencing & Editing

A genome sequence is a specific order of DNA building blocks (A, T, C, G) in a living organism; the human genome is made up of 20,000 genes and more than 3 billion base pairs of these genetic letters. Sequencing the genome is a critical first step to understanding it.

The latest technology called high-throughput sequencing (HTS) allows the sequencing of DNA to occur in one day—a process that once took a decade when it was first done. When changes are made to DNA at a cellular level, it's called gene editing.

Google's tool DeepVariant uses the latest AI techniques to turn high-throughput sequencing (HTS) into a more accurate picture of a full genome. The Canadian start-up Deep Genomics uses its AI platform to decode the meaning of the genome to determine the best drug therapies for an individual based on the DNA of the cell. CRISPR ,a gene-editing technology, is a collaboration between computer scientists and biologists. There are positive outcomes for “editing out” genes that might cause disease or “editing in” genes that create high-yielding, drop-resistant crops, but it also introduces complex ethical, moral and legal implications.

One way of Approach is to design the learning systems extract heuristics from existing adaptive systems. Genetic Algorithms are Heuristic learning models based on principles drawn from natural evolution and selective breeding. Genetic Algorithms are also applied in areas of traditional ML problems,including concept learning from examples,learning weights for neural nets and learning rules for sequential decision problems.

The chromosome of the genetic algorithm represents a set of condition action rules for controlling any functions or actions of robot.The performance is measured on a resulting control strategy (using simulator) in adverse conditions such as; tracking a prey,seeking a goal while avoiding obstacles,Thus learning from multi-agent environments and also from the behaviour exhibited from external agents. So hence focusing on learning competitive strategies against an opponent which is itself a learning agent.

Artificial intelligence and machine learning help make gene editing initiatives more accurate, cheaper and easier.The future for AI and gene technology is expected to include genetic screening tools for newborns, enhancements to agriculture and more. While we can't predict the future, one thing is for sure: AI and machine learning will accelerate our understanding of our own genetic makeup and those of other living organisms.



AISHWARYA
MUCHANDI



Why Do We Fear?

*"Fear leads to anger,
Anger leads to hate,
Hate leads to suffering.*

Conquer that fear & live life well!"

Fear is an emotion induced by perceived danger or threat, which causes physiological changes and ultimately behavioural changes, such as fleeing, hiding, or freezing from perceived traumatic events. In humans and animals, fear is modulated by the process of cognition and learning.

Karen Thompson Walker shows how fear propels imagination, as it forces us to imagine the possible futures and how to cope with them. The fear response starts in a region of the brain called the amygdala. This almond-shaped set of nuclei in the temporal lobe of the brain is dedicated to detecting the emotional salience of the stimuli – how much something stands out to us.

When we are in a state of fear, there are stress hormones in our bloodstream. Researchers have shown that low and medium levels of the stress hormone, called cortisol, improve learning and enhance memory, whereas high levels of the stress hormone have a bad effect on learning and memory

Make a way through it that will lead you, guide you, show the world that you are a positive creature of God. Conquer your fear - be busy, explore, travel, pursue hobbies - try to be that person who you want to see in others.

Each of us must confront our own fears, must come face to face with them.

Some may suffer from a condition known as gelotophobia, or the fear that others will laugh at them is one of the leading fear in students. Not only students but over 40% people over the world suffer from this condition.

The Age of Miracles shows how fear propels imagination, as it forces us to imagine the possible futures and how to cope with them. Fear can lead to many physical, mental, health issues. Fear can be because of politics, judgement of society, caste issues , power, etc.

But one thing is clear fear is not the solution - conquer your fear! Be mentally, physically fit so that you will overcome your fear and motivate others to do the same.

The only solution to overcome your fear is to be mentally strong, putting forth positive behaviour and believing that life will guide you.

Each and every day is different - conquer that fear live life well!

HETAVI
SINGH



A Brief History of Automation

The history of automation is closely linked to mechanisation, which in turn reflects on the human progress throughout aeons. The first tools, made of stone, were the earliest attempts to aid human strength. These were followed by simple mechanical devices like the wheel, the lever and the pulley. The human strength then took a backseat with the invention of powered machines like windmills and waterwheels which operated on their own. A fully functional mechanical clock, with a built-in power source (a weight), was developed in Europe in 1335. The steam engine and the Jacquard loom were two very important inventions that gave rise to the Industrial Revolution, an event which magnified automation on a never-seen-before scale. Each new development eliminated the need for manual labour in a particular step of the process.

As it turns out, D. S. Harder, an engineer manager at the Ford Motor Company, is credited with coining the word "automation" in around 1946. Earlier, it was used in reference to only the manufacturing industry, particularly the mechanical domain. However, the 20th century gave rise to four significant developments -

- the electronic digital computer was invented and integrated circuits were developed which miniaturised and thus improved computer technology
- huge improvements were made in data storage technology and computer software
- sensor technology advanced by leaps and bounds, which led to a vast array of precise measuring devices
- a mathematical control theory which combines traditional negative feedback control, optimal control, adaptive control and artificial intelligence, was derived. Traditional feedback control theory uses linear ordinary differential equations to analyse problems, optimal control theory and adaptive control theory define an index of performance for the process of interest, and artificial intelligence mimics the way the human mind works.

Thus, millennia of human progress and the unending search for a more comfortable (some might even say luxurious) life has led us to automation as we see it today. In the next article, we will look at the present form of automation and what it constitutes.



MUKUL
AIGALIKAR



Corona Virus: The Batch of 2020

Amid the corona Virus crisis that everyone is facing in the world, there's another crisis that's going on, the students' crisis or the Batch of 2020's crisis.

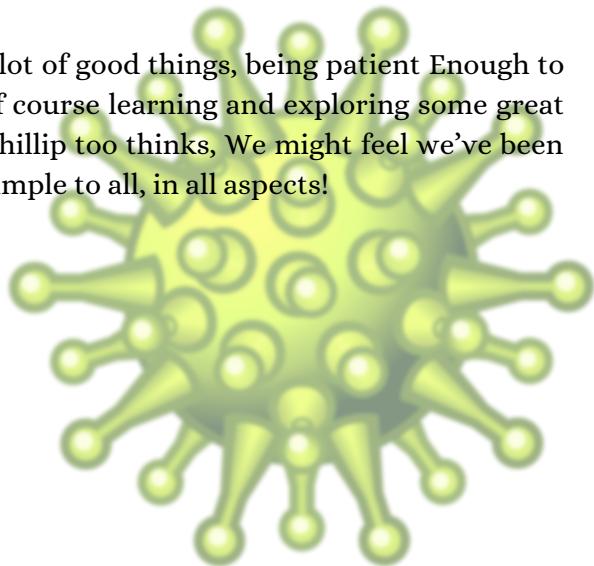
All the hardwork done across all the previous semesters just to achieve the degree has come to an halt altogether. From clearing the backlogs,sipping tea and coffee with friends in the College premises and running around in the campus for organizing various activities, everything has come a complete standstill.

From expecting grand Farewell we've come to our own kitchens where we're experimenting some new dishes. From wearing great attire and looking great in the college, we've come to a time where it is even difficult to go for a haircut.

Yeah life is sometimes funny, it teaches you a lot of things, in fact people who never ever have been to kitchen to drink a glass of water are experimenting different dishes, right from cakes to even baking breads for themselves.

But remember, the batch of 2020 will be remembered for a lot of good things, being patient Enough to recieve degrees, staying strong together as one team and of course learning and exploring some great new things, We will be remembered and that's what Anto Phillip too thinks, We might feel we've been denied a few things that we deserved,but we have set an example to all, in all aspects!

Stay Home, Stay Safe!





Credits

Aaditya Muley - Editor in Chief & Design

Mukul Aigalikar - Content Collection

Kaushal Attal - Content Collection & Promotion

Rakshit - Promotion

Tanmay - Posters

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