15th August 2019

Our Privacy Continues to Be Threatened, but a Solution is Coming

All those new technologies, platforms and services gobble up massive amounts of data and more often than not, this data is not very well protected. For the past years, we have seen thousands of data breaches, with, in 2017, the data breach of Equifax as a new low point. Unfortunately, 2018 will not be any different. The more devices we will connect to the internet, the more data we create, the more security breaches we will see. IoT devices are remarkably insecure, thereby continuing to threaten our privacy. Consumers are aware of this as 90% of consumers lack the confidence that their IoT devices are secure. As long as organizations that develop internet connected devices do not take security seriously, and develop products such as cardiac devices that can be hacked or CCTV cameras with serious bugs, this trend will only get worse. 2018 will see continued development of Zero-Knowledge Proof, making our society slowly a little bit more private again.

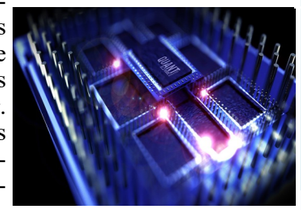
-Mr. Bhimade S. S.

Workshop

Department had organized 15 days workshop on **Android** and **Python Programming** for Third Year Student and **PHP** programming for Second Year Students in collaboration with **"TechWings International IT Solutions"**. The main motive while arranging such workshop is to bridge gap between Academics and Industry and make the student Industry skilled and ready for working.

A Quantum Computing Arms Race Will Lead to First Results

In this year's hype cycle for emerging technologies, Gartner estimated that quantum computing is still more than ten years away. However, the developments in quantum computing are going a lot faster than expected. The race for the holy grail of computing is on, and companies such as Google, D-Wave or IBM, universities such as Yale or UNSW or startups such as Computing are all working on developing quantum computers. Each of these organizations has reported breakthroughs in 2017, with the latest being IBM who announced the first 50-qubit quantum processor in November 2017. A 50-qubit quantum processor is getting closer to quantum supremacy, which IBM now estimates to be at around 57-qubits. Quantum supremacy is defined as the ability of quantum computing to solve problems which can no longer be solved with the world's fastest supercomputer. Not only organizations are working on achieving this quantum supremacy, but also countries are investing billions in it. China is building the world's biggest quantum research facility.
Their objective is to have a quantum computer by 2020 that has the computational power of a million times all computers in the world combined.



-Mr. P. S. Bhandare

Cognitive Technologies

Artificial intelligence (AI) refers to computer systems that are able to perform tasks that normally require human intelligence. There is a distinction between artificial intelligence, a field with hazy conceptual boundaries, and the technologies that employ it, the cognitive technologies. These include machine learning, computer vision, speech recognition, natural language processing and robotic. These technologies are helping replicate human capabilities across the spectrum of sensory perception, deduction, reasoning, learning and knowledge. At a sensory perception layer, technologies such as computer vision and speech processing are providing better and faster insight into information contained in audio, video and still images, and helping to deliver superior user experiences. At a decision-making layer, technologies such as machine learning and deep learning are helping systems interpret information and arrive at effective, informed decisions.

-Shekhar Chaugule (TYCO)

SVERI's College of Engineering (Polytechnic), Pandharpur
Department of Computer Engineering
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In touch with tomorrow
COMPLIT
The Computer Literature..!
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Department Vision

To provide diploma education strengthened with basic knowledge and skills along with professional ethics enabling students to reach higher goals in the field of Computer Engineering.

Department Mission

1. To impart value based Technical Education in Computer Engineering.

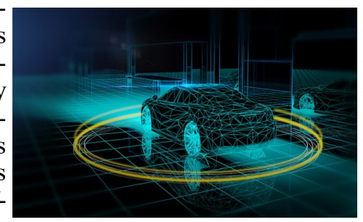
2.To support for technical knowledge of students in the field of Computer Engineering.

3.To make the students efficient in various skill Sets in Computer Engineering.

4.To encourage students for lifelong learning.

Edge Computing Enables Intelligent Networks

Edge computing is the key factor to make the Internet of Things work since connected devices will generate so much data that transmitting, storing and analyzing all that data at a central location is no longer viable. Not only that, connected devices such as drones, self-driving cars or robots will, most likely, require extremely rapid processing. Creating the data, sending it to the cloud for analysis and returning the results to the device will simply take up too much time.



The predictions are that in the coming decade, we will add approximately 100 trillion sensors to our global economy, generating an unfathomable amount of data. The solution for all this data that requires rapid processing is doing edge computing; computations on the sensor itself, albeit at first this will be done on the device instead of on the sensor. Peter Levine, a general partner at venture capital firm Andreessen Horowitz, even believes that edge computing will slowly take over cloud computing. Although that might sound pretty crazy, it also seems very logical. Today, an average self-driving car produces approximately 1 Gigabyte of data per second, which will likely increase in the years to come. Having to send that data to the cloud, analyses it and return the results would simply not work.

-Akanksha Pawale (SY CO)

Message of HOD

It is our pleasure to present News Letter **"CompLit"** of our department. This news letter is one of the ways in which we can disseminate the information about our department. The past semester was full of various activities by the students and faculty in Academic, Co-curricular and Extra-curricular activities. As you read through pages, you will realize that we have succeed in academics as well as in different co-curricular activities.

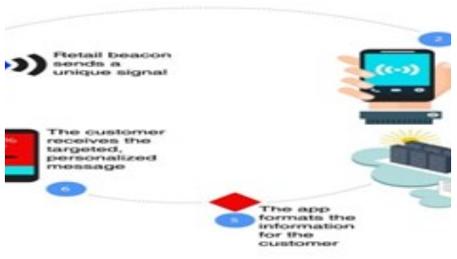
-Mr. A.S. Bhatlavande

Beacon Technology

Beacons are small, wireless transmitters that use low-energy Bluetooth technology to send signals to other smart devices nearby. They are one of the latest developments in location technology and proximity marketing. Put simply, they connect and transmit information to smart devices making location-based searching and interaction easier and more accurate.

The beacon device itself is incredibly simple. Each device contains a CPU, radio, and batteries, and it works by repeatedly broadcasting out an identifier. This identifier is picked up by your device, usually a mobile, and marks out an important place in your environment.

The identifier is a unique ID number that your smartphone recognizes as unique to the beacon. Once connected, the beacon will carry out whatever function it has been programmed to perform. We will go into more detail later on some of the many functions beacon can carry out.



The Future of Beacons in Marketing:
The possibilities of beacon technology in proximity marketing and location-based technology are numerous. As data gathering tools, beacons offer Google a chance to better understand businesses that use their services, as well as the users themselves, in order to improve their algorithm.

Yash Katkamwar (TY-CO)

Amazon Web Services (AWS)

Amazon Web Services provides services from dozens of data centers spread across availability_zones (AZs) in regions across the world. An AZ represents a location that typically contains multiple physical data centers, while a region is a collection of AZs in geographic proximity connected by low-latency network links. An AWS customer can spin up virtual machines and replicate data in different AZs to achieve a highly reliable infrastructure that is resistant to failures of individual servers or an entire data center.

Amazon Web Services (AWS) is a subsidiary of Amazon that provides on-demand cloud computing platforms to individuals, companies, and governments, on a metered pay-as-you-go basis. In aggregate, these cloud computing web services provide a set of primitive abstract technical infrastructure and distributed computing building blocks and tools. One of these services is Amazon Elastic Compute Cloud, which allows users to have at their disposal a virtual cluster of computers, available all the time, through the Internet. AWS's version of virtual computers emulate most of the attributes of a real computer including, hardware central processing units (CPUs) and graphics processing units (GPUs) for processing, local/RAM memory, hard-disk storage; a choice of operating systems; networking; and pre-loaded application software such as web servers, databases, customer relationship management (CRM), etc.

The AWS technology is implemented at server farms throughout the world, and maintained by the Amazon subsidiary. Fees are based on a combination of usage, the OS/software/networking features chosen by the subscriber, required availability, redundancy, security, and service options. Subscribers can pay for a single virtual AWS computer, a dedicated physical computer, or clusters of either. As part of the subscription agreement, Amazon provides security for subscribers' system. AWS operates from many global geographical regions including 6 in North America.

-Pragati Gund (TY CO)

Departmental Result for A.Y. 2018-19

15th August 2019

Sr. No.	Name of Student	Marks %	Class
1	Pawale Akanksha Ganesh	93.87	FYCO
2	Pawar Nupur Nilesh	91.50	FYCO
3	Rajeshwari Dharmraj Ghodake	90.75	FYCO
4	Pujari Mahananda Sidgonda	90.40	SYCO
5	Ranpise Priti Pandit	89.47	SYCO
6	Gund Pratiksha Pandit	88.93	SYCO
7	Khadake Siddhesh Jagadish	92.38	TYCO
8	Korade Rushikesh Shrikant	92.25	TYCO
9	Vasekar Priti Ramesh	91.13	TYCO

Student Achievements for A.Y. 2018-19

Name of Student	Subject	Marks	Class
Pawale Akanksha Ganesh	EEC	100	FY CO

2nd Rank in MSBTE State level Project Competition

-Mr. Zambare S. A.

Solapur Rural Police sponsored one project on Online Police *Bandobast* (Management) System which is named as BAAS (Bandobast Allocation and Attendance System). According to their requirement, a website and an Android App are developed for distributing and controlling police *Bandobast* through an online system. The first testing of this software was held in the month of December 2018 for VIP *Bandobast*In the month of March 2019, MSBTE organized **State Level Project Competition** at Sanjay Ghodawat Polytechnic Kolhapur. In the project competition, the project received the second prize worth Rs. 50,000. Similarly, in SKN Sinhgad College, Pune the project achieved the best project award worth Rs 21,000/-

Using this application, police department can control the duty allocation and attendance of each and every on duty official.

In case of any emergency, duties can be rearranged as per the availability of the reserve staff.

Faculty Achievement

Faculty	Workshop
Mr. M. K. Jadhav	Industry 4.0
Ms. M. P. Pawar	Industry Consulting
Ms. J. S. Pawar	High Speed Digital System
Mr. P. S. Bhandare Ms. J. S. Pawar	R-Programming

EDITORIAL

Its our pleasure to present this issue of COMPLIT with new design. We are thankful to all faculty members and student friends for their co-operation. We will continue the journey of learning and implementing technologies in future also.

Thank you all…!

Mr. P. S. Bhandare **Mr. Zambare S. A.**

This project is developed by teachers Mr. S. A. Zambare, Mr. A. S. Bhise. A.S. Bhatlavande, Mr. P. S. Bhandare and students Siddhesh Khadake, Tejas Patil, Yashraj Chavan, Dhawal Dyavanpalli, Rohit Konde, Prajwal Bendale, Abhishek Warpe and Atharv Ruplag.