Sandip Foundation's

Sandip Institute of Engineering and Management, Nasik

DEPARTMENT OF COMPUTER ENGINEERING

Presents

E-Insights

Volume 3 Issue 1 2021-22

About SIEM

Sandip Institute of Engineering and Management (SIEM) is located in the scenic, eco-friendly and conductive-to-study campus at an elevation off the Trimbak Road (Mahiravani, Nasik) leading to one of the twelve renowned pilgrimages of jyotirlingas known as Trimbakeshwar (abode of Lord Shiva) at the foot hills of Brahmagiri mountain ranges. SIEM is approved by All India Council for Technical Education, New Delhi Government of India and affiliated to Savitribai Phule University of Pune. SIEM is committed to imparting quality education in an atmosphere that will ensure that its students are confident, self-motivated and industry-ready. Towards this goal, we are giving importance to qualified and experienced faculty for effective teaching-learning process, equipping our laboratories with best-in-class machines and instrument and developing overall personality of our students (with emphasis on strengthening the fundamentals of subjects, ability to work as a team and good communication skill). There is a well formulated regime with a blend of theoretical learning and practical experience. This enables the faculty to guide the students to learn tomorrow, today.

Sandip Foundation's
Sandip Institute of Engineering and Management, Nasik.
Department of Computer Engineering
July, 2021 E-Insights Volume 3: Issue 1

About Department

Computer Engineering

The Department of Computer Engineering sustains and strengthens its teaching and learning program by adapting a comprehensive student centric approach designed to add significant value to the learner in an integrated manner through conceptual and interactive teaching, active lab sessions, seminars, projects, and independent study. As the continued up gradation of the knowledge and skills of faculty members is vital for continuous growth and development of the department, faculties are motivated to attend workshops, seminars, conferences and Training programs. Department has well equipped state-of-the-art laboratories with latest hardware and software configuration for conducting various practical's as well as highly qualified and experienced faculty to nurture the future technocrats of the nation.

Editor-in-chief
Mr.M.V.Korade

Editor
Mr.Dhanesh Vasaikar
Ms.Nikita Singh

Vision and Mission of Institute

Vision of the Institute

We at SIEM aspire to be a globally recognized Institute that delivers a world class education to outstanding intellectuals by nurturinc and grooming their interests, creative abilities and thrusts to acquire a life-long learning so as to imbibe values of their commitmen1 towards society.

Mission of the Institute

We at SIEM shall strive continuously,

• To inculcate and imbibe knowledge of cutting-edge technologies and its implementation for solving real life problems in E conducive environment.

• To collaborate with national and international institutes/industries/ universities of repute for sustainable growth through tearr work.

• To motivate and retain highly skilled and knowledgeable individuals, whose creativity and interest in teaching upholds to achieve desired goals. • To provide a dedicated platform to cater the needs of individuals and inspire them for their intellectual growth and character building.

• To enable the students to achieve excellence in the chosen fields and to share the responsibilities of citizenship and service in E disciplined manner.

Vision and Mission of Department

Vision of the Department

The department aims to be recognised in the field of quality education through excellence in teaching, learning, research and innovation for the betterment of society.

Mission of the Department

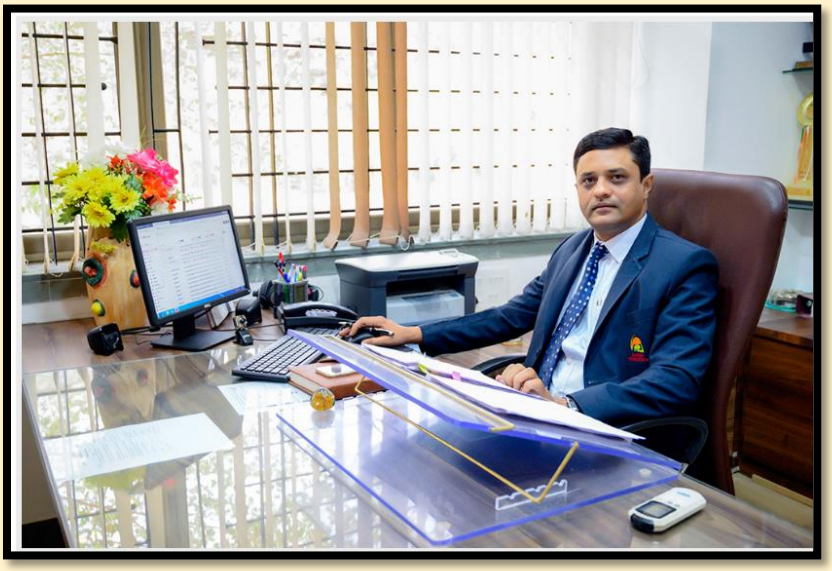
• To provide world class infrastructure with modern tools and technologies for better learning ambiance.

• To enhance problem-solving skills approaches by encouraging young and inspiring minds with innovative teaching & learning.

• To build competent professionals and entrepreneurs through collaborative learning with national and international institutes of repute.

• To contribute in the development of society & nation at large through excellence in research and innovation.

Golden Words from Principal



Welcome to Sandip Foundation's Sandip Institute of Engineering and Management.

Representing Sandip Institute of Engineering and Management is a great matter of pride for me. In this marvelous campus of Sandip Foundation, we strive to inculcate values in students which nurture them in a way that makes them excel in academics, innovation and personal growth. The prime interest of the institute has always been to impart knowledge, values, skills and wisdom in students to empower them to become the torch bearers of their respective fields.

We support an all-encompassing approach to education that integrates academic concepts with real-world applications. We pledge to deliver each and every stakeholder top-notch facilities and services. In order to integrate academic understanding to real-world problems and applications, our laboratories and research facilities provide students with hands-on learning opportunities.

We encourage our students to engage in extracurricular and intellectual activities as a supplement to their academic endeavors.

These experiences aid in the development of critical life skills, the enhancement of communication abilities, and the formation of enduring connections that will last a lifetime. The institutes additionally offer employability-enhancement programs, value-added programs, and credentials in addition to the primary academic curriculum. Furthermore, we furnish webinars, seminars, guest lectures, workshops, and skill-based training modules for advancing the level of bar of the knowledge of students' field of interest.

In my ability and as this prestigious institution's principal, I can confidently assure you that we are dedicated to creating an orderly and enriching campus environment. To ascertain everyone's success both academically and personally, we place a high priority on their well-being and provide the best assistance whenever required.

Let's change the world together and leave an enduring impression of being an integral part of the Sandip Group of Institutes.

Thank You. Best Regards.
Dr. Dipak P. Patil Principal

Valuable Words from Head of the Department

Greeting from the Department of Computer Engineering!!

The world is going through a tremendous positive transformation, and in education its effects are clearly visible. We in the Department of Computer Engineering wish to be part of this positive change utilizing our core strengths in Technical knowledge, Research, Data Analytics and world class Infrastructure. Department of Computer Engineering was established in the year 2010 with Batchelor of Computer Engineering (BE) Programme with Intake of 60. Being an integral part of an institution, Sandip Institute of Engineering and Management, Sandip Foundation, Nasik, naturally helps the department and its programmes imbibe all the values and ethos that have made the institute an epitome of excellence.

The rigorous education and training which students get, helps them to tackle the complexity of the engineering and corporate environment as they are able to unshackle themselves from the confines of mere technical competencies. With a carefully designed syllabus by SPPU, we keep up to the true Sandip Foundation tradition of sensitizing ourselves with the latest trends in the industry. The emphasis of the training, Value added Programs in the Department is on building technical as well as people skills, which is indispensable for each of our students to do well in their life.

The class being a heterogeneous mix of academically motivated students from diverse, yet related fields naturally enriches the learning environment, turning it into a fountainhead of vibrant ideas.

The response from both academic institutes as well as industry has been very enthusiastic and encouraging. This bears testimony to the fact that our alumni have made us proud by assuming various positions in reputed organizations like Persistent, Accenture, Amazon, Synel and many more. The placement of the students has been equally encouraging as they have joined many reputed organizations like Infosys, Persistent, Amazon, TCS, Accenture, etc

All these achievements of the department would not have been possible without the enthusiastic and dedicated work of our past and present faculty members. Department faculty members are exceptionally dedicated set of teachers and at the same time top notch researchers in their field of study publishing on regular intervals in reputed journals. They have also done the department extremely proud by writing various books, book chapters etc. Department has also been in the fore front of industry interaction.

We are supremely confident that in years to come Department with its rigorous and regularly updated syllabus, research, innovative teaching techniques and active participation with industry will enforce the reputation of as an enviable seat of higher learning.

Dr. K. A. Shirsath (Nalavade)
Head, Department of Computer Engineering
Sandip Institute of Engineering and Management, Nasik

Table Content

01. Tech for Good: Harnessing Technology for Social Impact.

In an increasingly digital world, technology is not only reshaping industries but also playing a vital role in addressing pressing social challenges. The concept of "Tech for Good" encompasses initiatives and innovations that leverage technology to create positive social, environmental, and economic impacts.

Key Areas of Impact

1. Education and Accessibility: Technology has made education more accessible than ever. Online learning platforms like Coursera and Khan Academy provide free resources to learner's worldwide, breaking down geographical and financial barriers.

2. Healthcare Innovations: Telemedicine has revolutionized healthcare access, allowing patients to consult with doctors remotely. Wearable technology, like fitness trackers and health monitoring devices, empowers individuals to take charge of their health.

3. Environmental Sustainability: Companies are utilizing technology to promote sustainability. Smart grids and IoT devices help optimize energy use, while apps for recycling and waste management encourage eco-friendly practices among consumers.

4. Social Justice: Technology facilitates activism and advocacy. Social media platforms amplify voices and movements, enabling grassroots

campaigns to reach global audiences, as seen in movements like #MeToo and Black Lives Matter.

Challenges and Considerations

While technology has immense potential for good, it also raises ethical concerns. Issues such as data privacy, misinformation, and the digital divide must be addressed to ensure that technological advancements benefit everyone equitably.

Conclusion

Tech for Good is a powerful movement that harnesses innovation to tackle societal challenges. As more organizations commit to leveraging technology for positive change, the future looks promising for creating a more equitable and sustainable world.

02. Digital Detox: Finding Balance in a Tech-Saturated World.

In an era where technology permeates every aspect of life, the concept of a digital detox is gaining traction. A digital detox involves temporarily unplugging from digital devices to restore balance, reduce stress, and improve mental well-being.

The Need for a Digital Detox

With the average person spending over seven hours a day on screens, the effects of constant connectivity can be overwhelming. Symptoms of digital fatigue include anxiety, reduced attention spans, and disrupted sleep patterns. A digital detox allows individuals to step back and reassess their relationship with technology.

Benefits of a Digital Detox

1. Improved Mental Health: Taking a break from screens can alleviate stress and anxiety, promoting a more relaxed state of mind.

2. Enhanced Focus and Productivity: Unplugging helps individuals regain their focus, allowing for deeper engagement in work and hobbies without digital distractions.

3. Stronger Relationships: Spending quality time offline fosters meaningful connections with family and friends, enhancing social bonds.

4. Better Sleep: Reducing screen time, especially before bed, can improve sleep quality and overall health.

Tips for a Successful Digital Detox

1. Set Clear Boundaries: Define specific times to disconnect from devices, such as during meals or before bedtime.

2. Engage in Offline Activities: Rediscover hobbies like reading, hiking, or painting to fill the time usually spent on screens.

3. Create a Tech-Free Zone: Designate certain areas of your home as tech-free zones to encourage face-to-face interactions.

Conclusion

A digital detox can lead to a healthier, more balanced lifestyle. By consciously unplugging from technology, individuals can reconnect with themselves and the world around them, ultimately enhancing their overall well-being.

03. The Future of Education: Technology's Role in Learning.

As we move further into the 21st century, technology is fundamentally transforming the landscape of education. From online learning platforms to interactive tools, tech is shaping how knowledge is imparted and accessed.

Key Trends in EdTech

1. Online Learning Platforms: The rise of MOOCs (Massive Open Online Courses) has democratized education, allowing anyone with an internet connection to learn from top institutions. Platforms like edX and Coursera offer courses from leading universities.

2. Personalized Learning: Adaptive learning technologies use algorithms to tailor educational content to individual student needs, enhancing engagement and effectiveness. Tools like Khan Academy provide customized learning paths based on student performance.

3. Virtual and Augmented Reality: VR and AR technologies create immersive learning experiences, allowing students to explore subjects like history and science in interactive environments.

4. Collaboration Tools: Platforms like Google Classroom and Microsoft Teams facilitate collaboration among students and educators, making group work and communication seamless, even in remote settings.

Challenges and Considerations

While technology in education offers exciting opportunities, challenges remain. Issues such as the digital divide, data privacy concerns, and the need for teacher training in new technologies must be addressed to ensure equitable access and effective implementation.

Conclusion

The future of education is being reshaped by technology, making learning more accessible, personalized, and engaging. As educators and institutions continue to embrace these innovations, the potential for a more inclusive and effective education system grows.

04. The Gig Economy: Redefining Work in the Digital Age

The gig economy has emerged as a significant force in the modern labor market, reshaping how work is perceived and executed. Defined by short-term contracts, freelance work, and on-demand services, the gig economy is powered by technology and is transforming traditional employment models.

Characteristics of the Gig Economy

1. Flexibility: Gig workers enjoy the ability to set their own schedules and choose projects that align with their skills and interests, promoting a better work-life balance.

2. Diverse Opportunities: Platforms like Upwork, Fiverr, and TaskRabbit connect gig workers with a wide array of jobs, from graphic design to home repairs, catering to diverse skills and interests.

3. Remote Work: Many gig jobs can be performed remotely, allowing individuals to work from anywhere, further enhancing flexibility.

Benefits and Challenges

1. Benefits: The gig economy provides opportunities for income diversification, skill development, and entrepreneurial ventures. It can also serve as a viable alternative for those facing barriers in traditional employment.

2. Challenges: However, gig workers often face instability and lack benefits such as healthcare, retirement plans, and job security. Additionally, the absence of a formal employment structure can lead to issues with fair compensation.

The Future of the Gig Economy

As technology continues to evolve, the gig economy is expected to grow. Companies are increasingly recognizing the value of flexible work arrangements, and advancements in digital platforms will further facilitate this shift. However, addressing worker rights and protections will be crucial in ensuring a fair and sustainable gig economy.

Conclusion

The gig economy is redefining the nature of work in the digital age, offering both opportunities and challenges. As more individuals embrace freelance and short-term work, understanding this evolving landscape will be essential for both workers and employers.

05. Report on Expert Lecture

1. **Event Title**: Expert Lecture on “Data analytics Methods”.

2. **Event Date**: 16/09/2021.

3. **Event Conduction Duration**: 1 day (Timings: 10 am to 12 pm)

4. **Event Venue**: Online (Google meet).

5. **Event Resource Person Details**: Prof.Piyush R. Kulkarni, Guru Govind Singh College of engineering, Nashik.

6. **Name of Event Coordinator**: Prof. M.S. Deshmukh.

7. **Expected Audience**: Students of B.E. Computer Engineering Department.

8. **Number of Participants**: 42

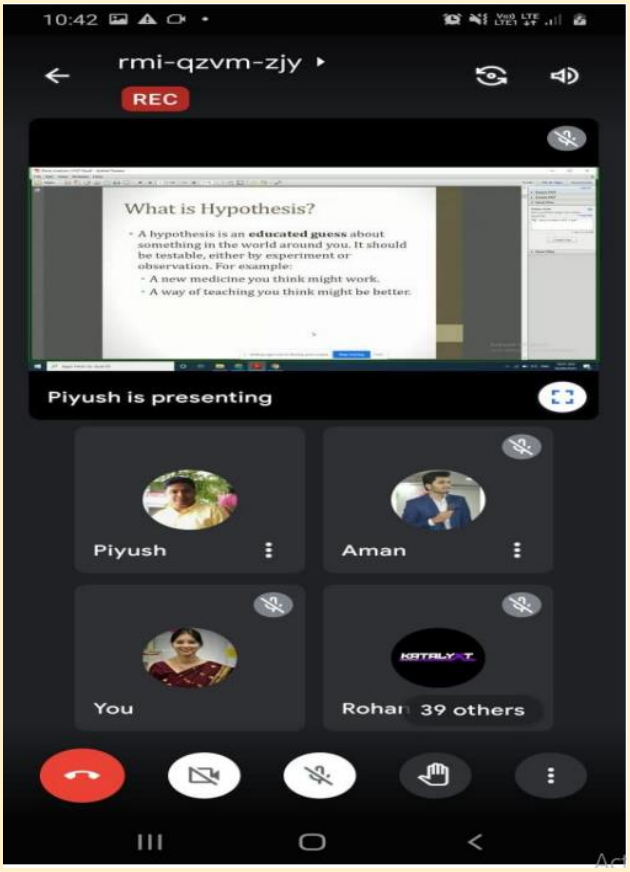
9. **Course Content**: Statistical Methods for Evaluation- Hypothesis testing, difference of means, wilcoxon rank–sum test, type 1 type 2 errors, power and sample.

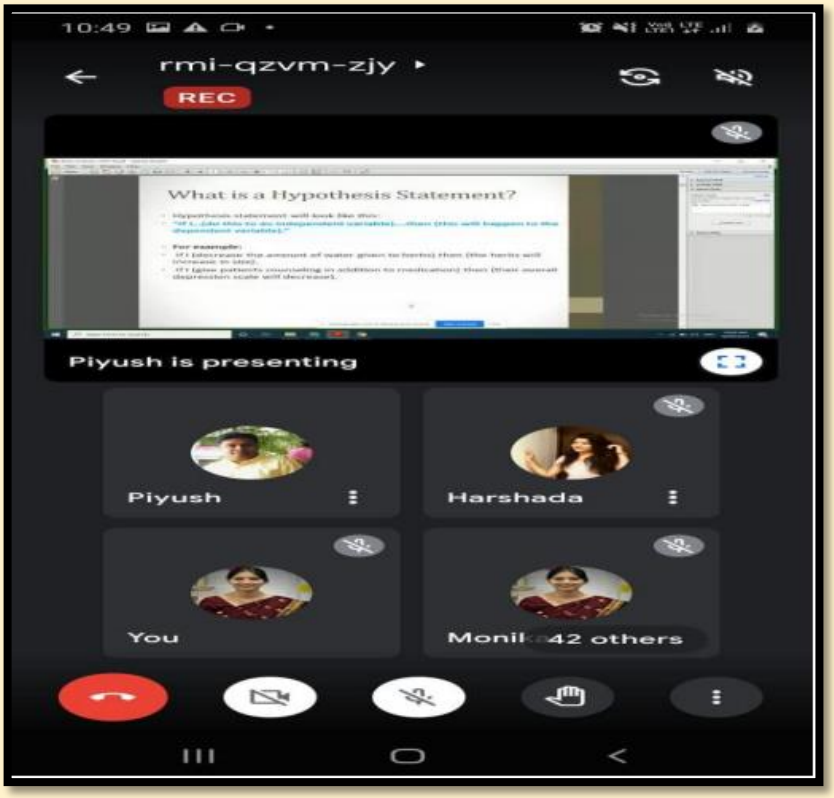
10. **Event Objectives & Outcomes:**

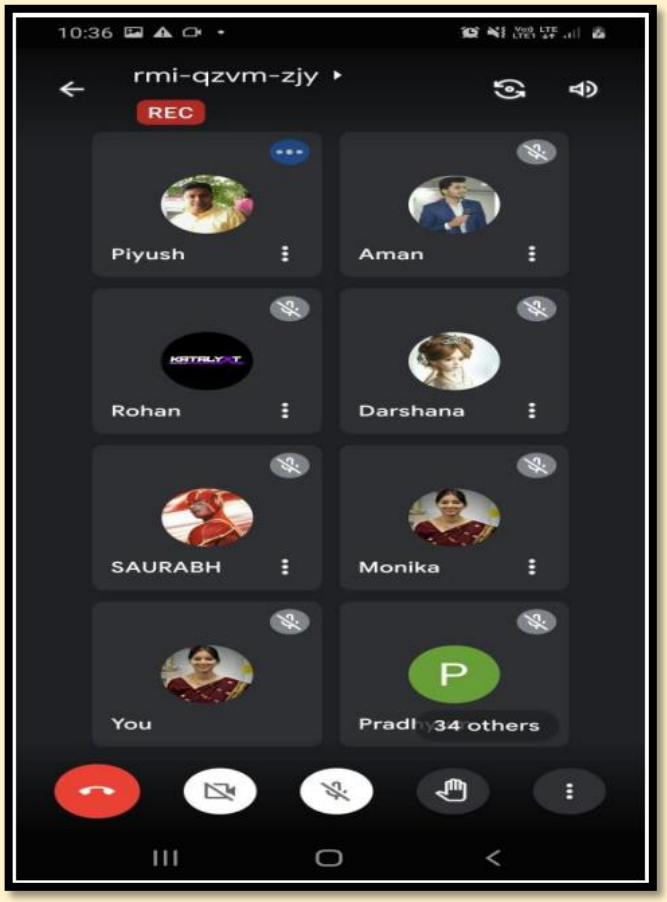
Objectives: To Prepare engineering students to analyze Data using basic data analytic methods.

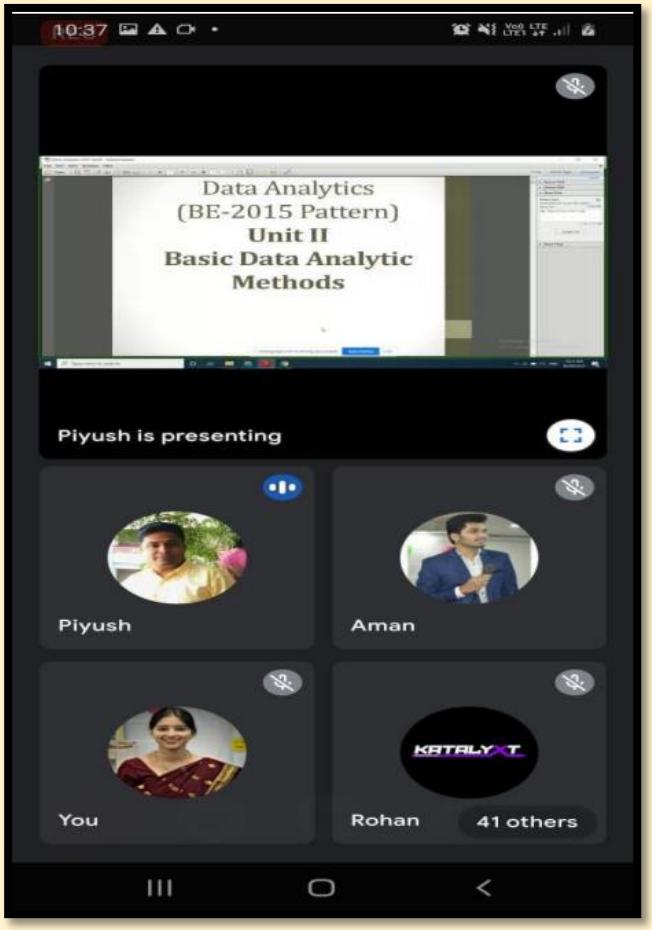
Outcomes: Perform and evaluate Statistical Methods for Evaluation- Hypothesis testing, difference of means, wilcoxon rank–sum test, type 1 type 2 errors, power and sample

11. Photo


10:42
rmi-qzvm-zjy
REC
What is Hypothesis?
A hypothesis is an educated guess about something in the world around you. It should be testable, either by experiment or observation. For example:
A new medicine you think might work.
A way of teaching you think might be better.
Piyush is presenting
Piyush
Aman
You
Rohan 39 others


10:49
rmi-qzvm-zjy
REC
What is a Hypothesis Statement?
Piyush is presenting
Piyush
Harshada
You
42 others


10:36
rmi-qzvm-zjy
REC
Piyush
Aman
Rohan
Darshana
SAURABH
Monika
You
34 others


10:37
Data Analytics
(BE-2015 Pattern)
Unit II
Basic Data Analytic Methods
Piyush is presenting
Piyush
Aman
You
Rohan
41 others

06. Report on Expert Lecture

1. **Event Title**: Expert Lecture on “Recent Trends in IoT”

2. **Event Date**: 19/10/2021.

3. **Event Conduction Duration**: 1 day (Timings: 10 am to 12 pm)

4. **Event Venue**: Online (Google meet)

5. **Event Resource Person Details**: Prof. Rajiv R Bhandari, Assistant Professor, SNJB’s College of Engineering, Chandwad.

6. **Name of Event Coordinator**: Prof. M. V. Korade

7. **Expected Audience**: Students of SE and TE Computer Engineering Department.

8. **Number of Participants**: 42

9. **Course Content**: Introduction to IoT, Recent trends in IoT, Block Chain Technology.

10. **Event Objectives & Outcomes**:

Objectives:

To prepare engineering students with recent trends in internet of things, block chain technology.

Outcomes: Students got the knowledge about recent trends in Internet of Things and different technologies.

11. **Photos**


but what does the Internet of Things
actually mean IOT is an evolution


analyze it they can transform our
businesses our lives


analyze it they can transform our
businesses our lives


CREATING SMART CITIES


A Report from the Business Insider predicts that by 2020, there will be 50 billion devices connected to the Internet.
The same report points out that over the next five years, the industry will spend almost $6 trillion on IoT solutions.
A Good Reason to Keep An Eye on the Internet of Things market.Here are the 5 latest IoT trends you should watch in 2017.


Smart City &
Transportation

07. Report on Expert Talk

1. **Event Title**: Expert Talk on “Latest Web Technology”.

2. **Event Date**: 15/12/2021.

3. **Event Conduction Duration**: 1 day (Timings: 3PM to 5 PM)

4. **Event Venue**: Online (Google meet)

5. **Event Resource Person Details**: Mrs. Sonali Gorade, CEO Sumago Infotech, Pvt. Ltd.

6. **Name of Event Coordinator**: Dr. K. C. Nalavade.

7. **Expected Audience**: Students of TE, BE Computer Engineering Department.

8. **Number of Participants**: 57

9. **Course Content**: Latest Technologies and Tools, App Development, Career Opportunities.

10. **Event Objectives & Outcomes**:

Objectives:

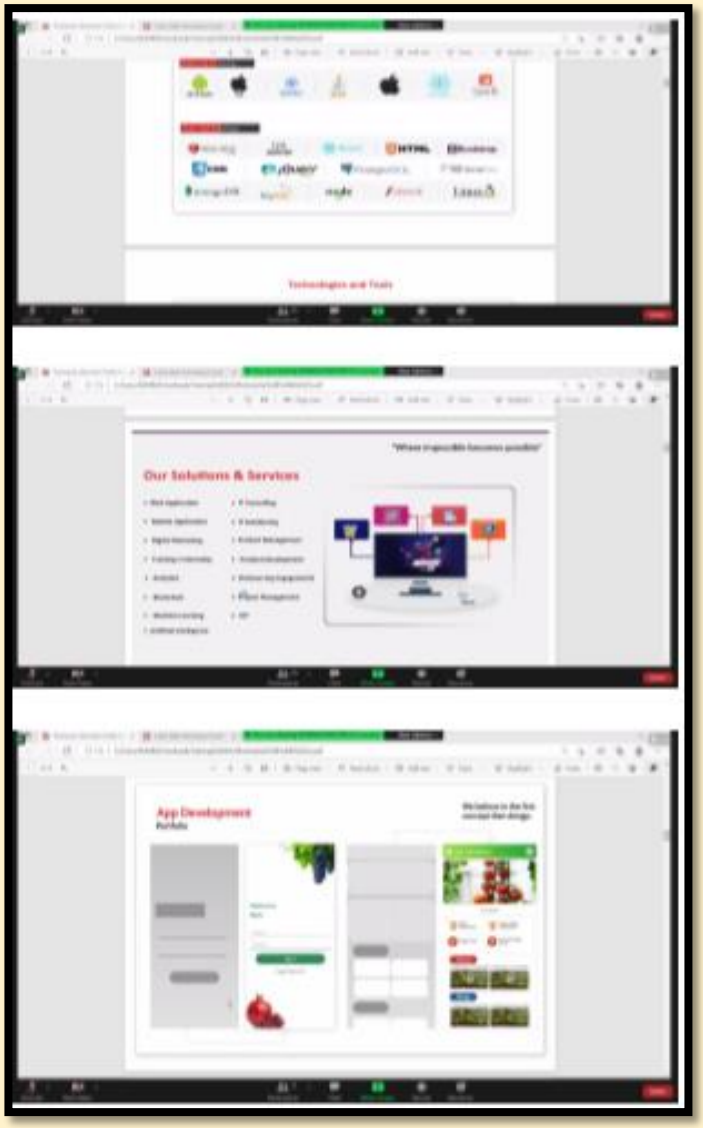
To give an idea about Latest Technologies and tools, app development and career opportunities.

Outcomes:

All Students got the knowledge latest technologies and tools as well as career opportunities.

12. **Photos**


Sumago Infotech
Sumago Infotech Pvt. Ltd.


Our Solutions & Services
App Development


Benefits
Career Opportunity