



UNIVERSAL

Vidya Vikas Education Trust's

# Universal College of Engineering

Approved by AICTE, DTE, Maharashtra State Government and Affiliated to University of Mumbai

Accredited with 'B+' grade by NAAC | Recognised as Linguistic (Gujarati) Minority Institution

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# Coffee & Code ;

An Initiative by the Department of Computer Engineering

## VISION

To be recognized as a department that provides quality technical education and research opportunities that eventually caters to helping and serving the community.

## MISSION

- To groom the students to participate in curricular and co-curricular activities by providing efficient resources.
- To motivate the students to solve real world problems to help the society grow.
- To provide a learning ambience to enhance innovations, team spirit and leadership qualities for students.

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## Prepared by:

DR. JITENDRA SATURWAR  
MRS. HEZAL LOPES  
MR. SRIDHAR IYER  
MRS. ANCY ALMEIDA

In Association with



(Computer Engineering Student Association)

# Create an App in a Snap - Hands on Session

“CREATE AN APP IN A SNAP WITHOUT A SINGLE LINE OF CODING”



One of our Faculty members, Asst. Professor Sridhar Iyer had conducted a hands on workshop session for the teaching faculty members of the Universal College of Engineering on March 20th 2021.

This 1 Hour Workshop was specially conducted for the Teachers of the Universal College of Engineering, Vasai to stay updated with the latest technologies which could simplify their day-to-day tasks.

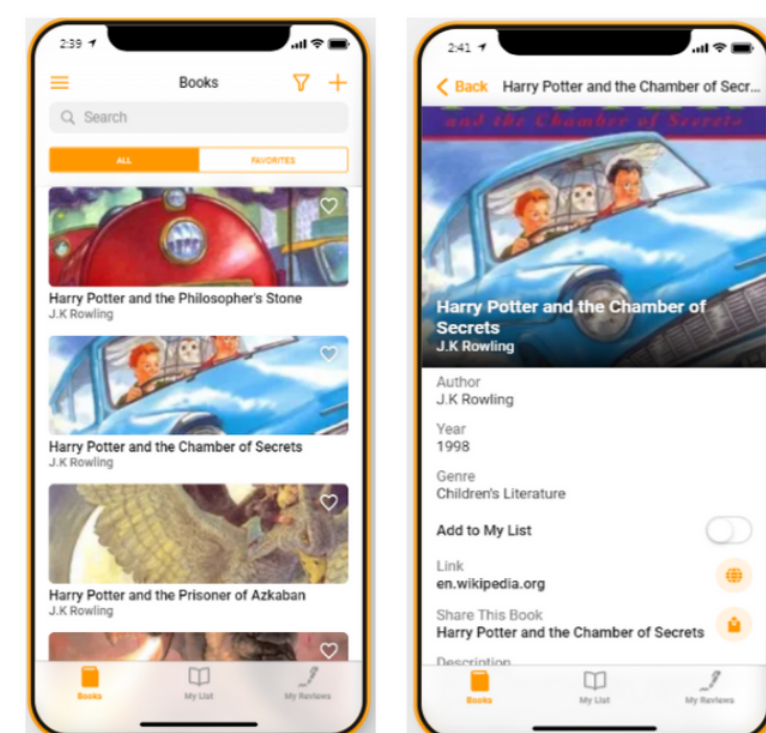
This session definitely helped all the participants to learn a skill and develop their own niche-based apps for a variety of needs.

After completing this workshop the participants were able to:

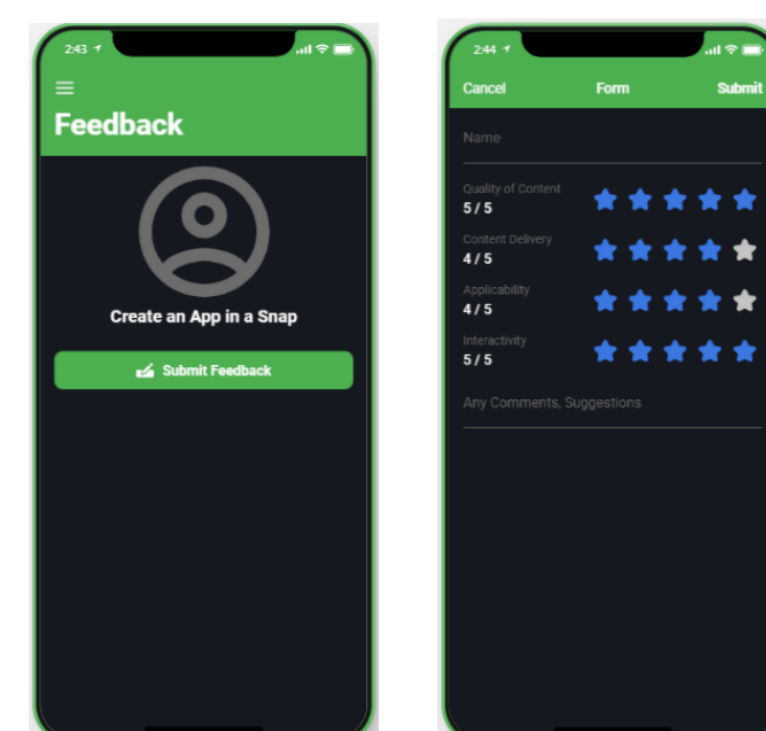
1. Learn to create a progressive web app from scratch without any line of coding in a hands-on approach.
2. Learn how to convert a simple google spreadsheet into a fully functional web app in few minutes.
3. Learn how to publish and share the app.
4. Customize the app according to your needs.
5. Create an app to address your various niche-based tasks like data entry, event registration, lecture video sharing, etc.



Lecture App



Book Sharing App



Feedback App



# 'IoT' - Transforming Safety for Women and Children



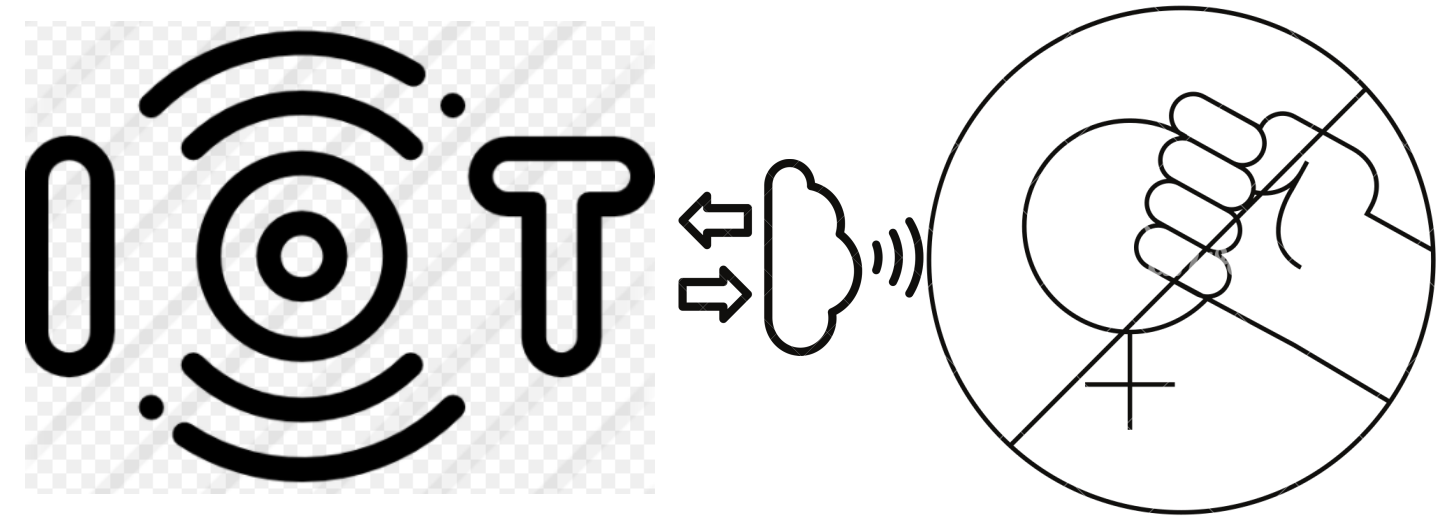
Many IoT devices are being devised that can protect women and children in emergencies. Devices and software are being developed to the changing lifestyles and their challenges. There are wearables that can be worn by kids and women, along with software that could send alerts to the preset numbers.

The world has witnessed massive progress in women's involvement in almost every thinkable area of work. However, it is a harsh reality that the scenario is scary not just in India but worldwide. People are trying to create a better environment for women to work freely without any fear or inhibitions. Technology seems to be the tool that could change the game, though not overnight but gradually.

IoT specifically has a substantial potential in the direction. Many IoT devices are being devised that can protect women and children in emergencies. These devices can share the details of location and send emergency alerts or ring an alarm simply by the press of a button. There were requirements for a device that wouldn't even need the pressing of a button. This was due to the likelihood that the woman at that moment is not in a position to even be pressing a button.

We now have devices that can be activated to resolve this issue through changes in various parameters such as temperature, heartbeat, pulse, vibration, specific unusual movements through sensors. Once activated the system tracks the location of the women using GPS and triggers emergency alerts.

Various state authorities, government initiatives, and other firms are focusing on using IoT-enabled software to assist police in child and female safety. In a recent update in Vishakhapatnam, about 1,000 autos were equipped with Internet of Things-enabled GPS devices as part of the newly launched Abhayam App for women's safety.



**Lizmotors Mobility**, A Gurgaon-based company, is working on the development of a unified cloud-based software platform to address women and child safety. The software lets its users connect their IoT devices such as wearables, phones, vehicles, and security cameras and notify users or any third party instantaneously via alerts on their phones or computer if any anomaly is detected. The developed device that uses AI and ML software is connected to the cloud via the cellular network and can be integrated with any vehicle. The sensors integrated into the device monitor the driver as well as passengers and send out notifications if anything unusual is detected.

Most of these software employ scalable video platforms, big-data-driven insights, computer vision & facial recognition, IoT integration & data correlation, machine learning, geo-spatial analytics, and cyber security.

**My Safetipin App** is another personal safety app that helps make safer decisions about your mobility based on the safety score of an area. There are 9 parameters based on which the ratings are given, and a safety score is created. The parameters which are lighting, openness (Ability to see and move in all directions), visibility (Vendors, shops, building entrances, windows and balconies from where you can be seen), people around you, security (Presence of police or guards), public transport, gender usage (Presence of women and children near you), walk path (a pavement or road with space to walk), and feeling which is about how safe you feel in your current location or situation.

Women sitting at home or getting confined mentally or physically is not an option in this progressive world anymore. Though these IoT-enabled software are all set to provide some sense of security to women and kids, there is a lot of work that needs to be done to change the criminal mindset and curb these issues from the root.



**SOURCE:**[https://indiaai.gov.in/article/iot-is-transforming-safety-for-women-and-childrenutm\\_source=Newsletter&utm\\_medium=Organic Article&utm\\_campaign=IoT Safety PS](https://indiaai.gov.in/article/iot-is-transforming-safety-for-women-and-childrenutm_source=Newsletter&utm_medium=Organic%20Article&utm_campaign=IoT%20Safety%20PS)

# Problem-Solving in Software Engineering: An Inside Look

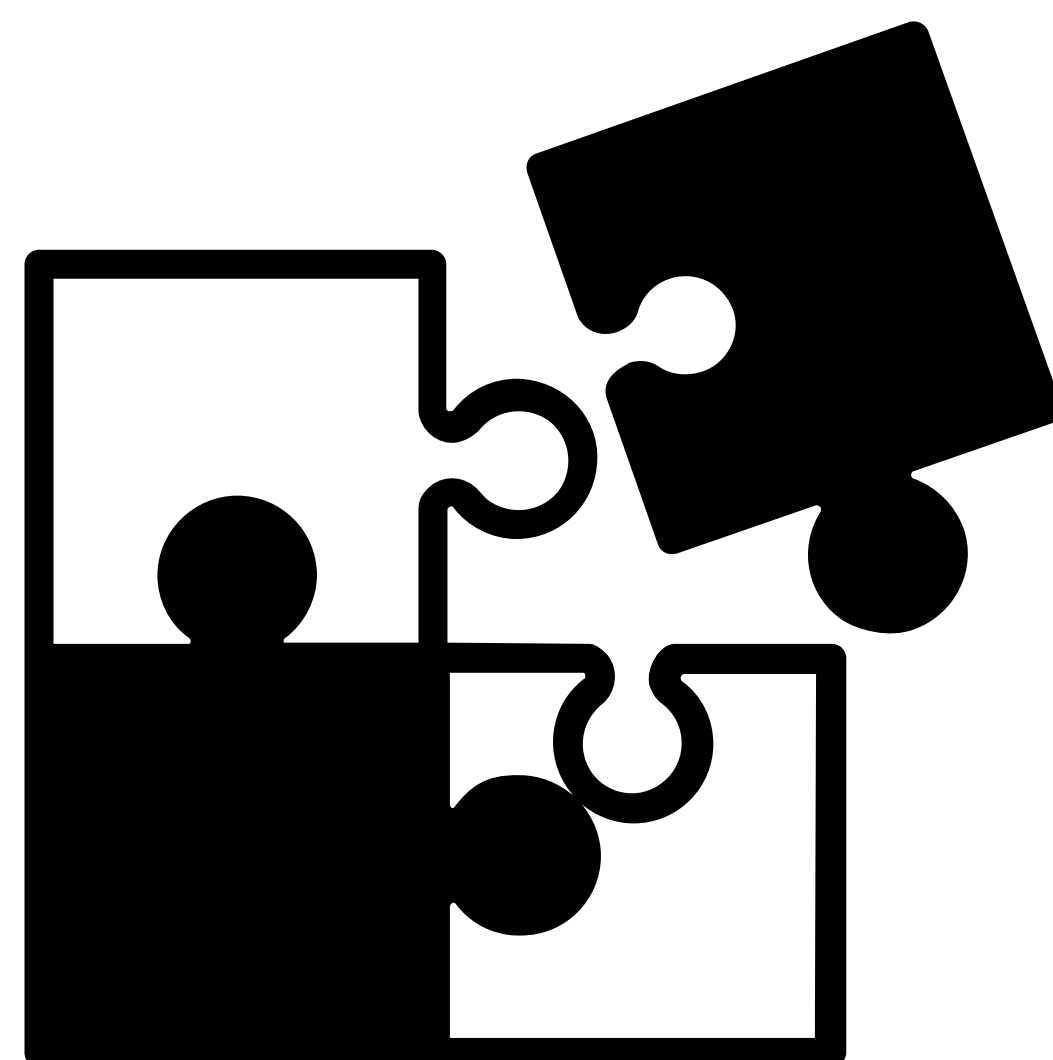
Software engineering is about problem-solving first, coding second. Why? Computers need to be told exactly what to do; they can't make assumptions like a human would when given vague instructions. Secondly, software engineers are tasked with designing features and applications that may not even exist yet, so it's their job to come up with the user interface on the front-end and data infrastructure on the back-end to power it from scratch

## *What types of problems do software engineers solve?*

Software developers work on a range of tasks, from pure coding to system-level design and troubleshooting. Much of an engineer's time is spent "debugging" – that is, detecting and correcting errors and bugs in the code that cause the program to break or behave unexpectedly. Using a computer language is a lot like writing; understanding solid grammar usage and sentence construction are more important than memorizing the entire dictionary.

Most of the web and mobile features we now take for granted took incredible problem-solving ingenuity. Take **Google's auto-complete tool**, for instance. This is a prediction feature in the Google search bar that suggests search terms related to what you're currently typing. According to Google, this feature reduces typing by about 25 percent.

**First**, developers had to design the UI experience and javascript to enable the program to autocomplete suggestions in real-time.



**Secondly**, they needed a sensible list of autocomplete suggestions based on what the user was typing. Given that the user can type literally *anything* into the search bar, there are an infinite number of possible variations.

**Thirdly**, Google had to develop a system to sustain this function on the back-end. Apparently, the autocomplete function generated such an enormous load on the system that Google had to increase its infrastructure by six times to support the added HTTP requests and data queries.

**Finally**, engineers had to refine the UI to create a socially acceptable experience for all users. The autocomplete function is powered by Google Trends, which makes suggestions based on the top searches people have made. However, Google algorithms remove predictions considered offensive, slanderous or sexually explicit under its autocomplete policy.

In the real world, software engineers work with numerous clients, many of whom don't know what they want or how to ask for it. A good software engineer knows how to extrapolate unmet needs and communicate their ideas effectively.

**SOURCE:** <https://alabou-ismail.medium.com/problem-solving-in-software-engineering-an-inside-look-2639c2bf2cf7>



# Faculty Activities



**Dr. Jitendra Saturwar has successfully completed Online Course on 'AWS Fundamentals: Building Serverless Applications' authorized by Amazon Web Services and offered through Coursera on 03 April 2021.**



**Mrs. Hezal Lopes and Mrs. Sharvari Patil attended Webinar on 'Developing Database Applications with Oracle Academy Cloud Program' conducted by Oracle Academy on 11 March 2021.**

# Faculty Activities



Mr. Sridhar Iyer attended 12 Hours Online Live FDP on 'Data Science Using R' conducted by ICT Academy on 08 March to 12 March 2021.

Mrs. Sharvari Patil attended 12 Hours Online Live FDP on 'Data Science Using R' conducted by ICT Academy on 08 March to 12 March 2021.



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You can send your articles to the following email ids:

sridhar.iyer@universal.edu.in, hezal.lopes@universal.edu.in , apurva.chaudhari@universal.edu.in