



**Bhoj Reddy Engineering College for Women**

(Sponsored by Sangam Laxmibai Vidyapeet, Approved by AICTE and Affiliated to JNTUH)  
Vinaynagar, IS Sadan Crossroads, Saidabad, Hyderabad-500 059, Telangana. [www.brecw.ac.in](http://www.brecw.ac.in)

**Department of  
Computer Science and Engineering**



**MAGAZINE**

**Sparkles  
2019**

**TECHNICAL**

**Volume 1**

***Creativity is just connecting things...!***



## Founders of Sangam Laxmibai Vidyapeet

Sangam Laxmibai Vidyapeet is a voluntary social action group working for empowerment of women and girls. Registered under the Andhra Pradesh Societies Registration Act, It is a not-for-profit organization working in the field of education since 1952.

The Management of the Vidyapeet makes every effort to fulfill the vision of its founders K V Ranga Reddy, Sangam Laxmibai, Mamidi Bhoj Reddy, Bojjam Narsimhulu, Pasham Papaiah, A Shyamala Devi, P Lalitha Devi, B Ramdev, M H Guptha who are no more with us.

### Sangam Laxmibai Vidyapeet

Established in 1952



**K V Ranga Reddy**  
(1890-1970)  
Founder President



**Sangam Laxmibai**  
(1911-1979)  
Founder Secretary



**M Bhoj Reddy**  
(1919-2001)  
Founder Treasurer

### The Vidyapeet manages 5 Educational institutions for Girls and Women

- M H Guptha High School for Girls
- Sangam Laxmibai Junior College for Girls
- K V Ranga Reddy Degree College for Women
- Bojjam Narsimhulu Pharmacy College for Women
- Bhoj Reddy Engineering College for Women





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### About BRECW

Bhoj Reddy Engineering College for Women is run by Sangam Laxmibai Vidyapeet, which has 72 years of experience in the field of education.

BRECW was established in the year 1997 and it is managed by an executive committee consisting of persons with a vast experience in the field of education. Within a short period, it has emerged as one of the premier Engineering colleges in the state.

The College campus has the unique advantage of being located in the heart of the city and yet free from noise and dust pollution. With considerable open space and greenery spread over 6.5 acres of land, the campus provides an ideal ambience for the engineering education of girls.

The academic performance of our students has been consistently outstanding with a pass percentage of 85 to 90.

### BRECW Vision

BRECW develops confident and articulate young women into dynamic Engineers equipped with skills, knowledge, values and an attitude to contribute to the society.

### BRECW Mission

- BRECW is committed to providing a challenging, enriching, safe and supportive technical learning environment through its core values of responsibility, respect and compassion.
- Fosters intellectual, spiritual and personal development of young women so that they develop the tools necessary to lead meaningful lives.
- Offers academic curriculum along with an extensive co-curricular program with the support of dedicated staff who ensure that students identify their strengths and develop their skills such as teamwork, leadership, creativity and entrepreneurship.
- Develops independent, adaptable thinkers with a passion for learning, courage to take risks and initiative to apply what is learned.



## Department of Computer Science and Engineering (CSE)

The future of computing systems and information systems rests with the engineers in Computer Science and Engineering (CSE). The Course is meant to advance, evolve and enhance computer science and computing engineering fundamentals to build the intellectual and research capital in the domains of science, engineering and technology. The Course endeavors to equip the CSE in development of computing and IT systems and their proper applications. This has become the core branch of Engineering with all branches depending on it. The department has well established computer laboratories.

### Department Vision



- To become a center of excellence in the field of Computer Science and Engineering.
- To produce competent, confident, innovative and socially responsible engineers with an ability to serve the society.

### Department Mission



- To impart high quality professional training at the undergraduate level with an emphasis on basic principles of Computer Science and Engineering.
- To pass on moral qualities and ethical values to the students.
- To empower the students with the required skills to solve technical problems of modern society.
- To make learning process exciting, stimulating, interesting and exposing students to broad research areas.



**South Block**

**CSE**

**Ground Floor  
&  
First Floor**



## Programme Outcomes (PO's)

### PO1 - Engineering Knowledge:

Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

### PO2 - Problem Analysis:

Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

### PO3 - Design/Development of Solutions:

Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

### PO4 - Conduct Investigations of Complex Problems:

Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

### PO5 - Modern Tool Usage:

Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

### PO6 - The Engineer and Society:

Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice

### PO7 - Environment and Sustainability:

Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

### PO8 - Ethics:

Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

### PO9 - Individual and Team Work:

Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

### PO10 - Communication:

Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

### PO11 - Project Management and Finance:

Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

### PO12 - Life-long Learning:

Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

## Program Specific Outcomes (PSO's)

**PSO I:** Identify suitable data structures and algorithms to design and develop computing solutions for real-life problems.

**PSO II:** Able to excel in various programming, project competitions and technological challenges laid by professional societies.

## Principal's Message



### **Dr C Berin Jones**

BE (CSE), ME(CSE), MBA, Ph. D(CSE)

Member of IEEE, professional and SIGITE member of ACM

Principal

Email: [principal.brecw32@gmail.com](mailto:principal.brecw32@gmail.com)

Dear Students,

Today the country is in great need of technically sound graduates having a strong aptitude to work with zeal and fervour. Our college focuses on offering the best of the technical education for the overall development of the students. When you walk out of the campus, you can be competent enough in carrying out all your personal as well as social responsibilities. Thanks to the training and placement cell of our college which intends students to be aware of the various job opportunities, imparts the necessary training and skills, and conducts campus interviews to recruit themselves in the final year of their graduation. It plays a crucial role in helping students to kick-start their career in their respective fields. I am pleased that the students are well known about all curricular, co- curricular and extra- curricular activities along with substantial emphasis on sports and cultural activities.

I specially wish to congratulate G Harshini a students of CSE of 2014-18 batch, for having topped the university examination and bagged two golds medals from JNTUH and also to our senior faculty members who have been felicitated for their 20 year of service in our college. Further , I appeal to all the students to give their best and take the maximum advantages of all the available resources so as to have a brilliant career in future.

**Together, we shall strive and cherish the journey to success.**



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## HOD's Message

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### **Mr G Dayakar Reddy**

M.Tech (CSE)

HOD-CSE

Email: [hod.cse.brecw@gmail.com](mailto:hod.cse.brecw@gmail.com)

Greetings! On behalf of staff and students of the Department of Computer Science and Engineering of Bhoj Reddy Engineering College for Women (BRECW) at Hyderabad.

Department of Computer Science and Engineering (CSE) is the centre of excellence providing in-depth technical knowledge and opportunities for innovation and scalable with up-to-date computer facilities at par with top engineering colleges in Telangana.

Ever since its inception in the year 1997 with an initial intake of 40 seats in B. Tech, the department has grown by leaps and bounds, not only in terms of quantity but also in terms of quality. Currently CSE department has an intake of 120 seats in B. Tech.

The department gives exposure to its students, about regular engineering curriculum as well as prepare them to face the challenges of today's corporate world, by inculcating a professional attitude in them. The highly qualified, immensely diligent and experienced faculty is continuously involved in developing the skill set of the students in core courses like Programming, Emerging Technologies, Professional Ethics, Open Source Technologies and as well as hands on experience. All the Very Best to all students.



# FACULTY CONTRIBUTION

## List of Workshops/FDP/Refresher courses attended for Academic Year (2018-19)

### K Usha Rani - Associate Professor

- FDP on “Induction Program” by IARE, Dundigal from 16.07.2018 to 22.07.2018
- Short-term course on “Soft Skills and Professional Ethics” by UGC, HRDC, JNTUH from 12.11.2018 to 17.11.2018
- FDP on “Artificial Intelligence” by UGC, HRDC, JNTUH from 02.12.2019 to 06.12.2019.

**Artificial intelligence (AI)** is the ability of a computer or a robot controlled by a computer to do tasks that are usually done by humans because they require human intelligence and discernment. The four artificial intelligence types are reactive machines, limited memory, Theory of Mind, and self-aware. Other subsets of AI include big data, machine learning, and natural language processing. Artificial intelligence examples include Face ID, the search algorithm, and recommendation algorithm, among others.

### M Vineela - Associate Professor

- FDP on To Train the Trainers for Implementation of Induction Program Organized by TEQIP – III, JNTUH from 17 May 2018 – 19 May 2018.

### P Sumalatha- Assistant Professor

- 8 Weeks AICTE recognized FDP course on “Artificial Intelligence” NPTEL Online Certification Course, July 2018 – September 2018
- 8 Weeks AICTE recognized FDP course on “Big Data Analytics” NPTEL Online Certification Course, March 2018 – April 2018.

**Big data analytics** refers to the systematic processing and analysis of large amounts of data and complex data sets, known as big data, to extract valuable insights. Big data analytics allows for the uncovering of trends, patterns and correlations in large amounts of raw data to help analysts make data-informed decisions. This process allows organizations to leverage the exponentially growing data generated from diverse sources, including internet-of-things (IoT) sensors, social media, financial transactions and smart devices to derive actionable intelligence through advanced analytic techniques.

## M Vinod - Associate Professor

### List of publications in International Journals:

- "Design and Development of Working in Bioinformatics of Computing Intelligence" International Journal of Advanced Research and Innovative Ideas in Education - ISSN(O)-2395-4396, Vol-4 Issue-3 2018.

### List of publications in International Conferences:

- "A Study of Role of Computing Plays in Bioinformatics Science" International Conference on Recent Advanced in Engineering, Sciences, Technology, Humanities and Management (ICRAESTHM-2019) organized by IJRPB Academic Conferences at Red Fox Hotel Hyderabad, Telangana, India on 25 August 2019.

### Abstract:

Bioinformatics is an interdisciplinary field that utilizes strategies for the board and examination of natural data. Essential uses of bioinformatics incorporate administration of natural data and data, investigation of organic groupings, examination of molecular structures. Progressed applications incorporate displaying of organic frameworks, in silicon experimentation, and reproductions of natural frameworks and cycles. Bioinformatics applications are regularly executed as programming apparatuses that are utilized to produce helpful organic information. Bioinformatics utilizations of AI uphold both essential and clinical research through assistance of cutting edge strategies for organic grouping correlation, structure-work investigation, protein-protein connection, and data recovery and information the executives, among others. Inside Bioinformatics, inter-disciplinary researcher's study how you can shoot, analyze, manage, and disseminate biological info in the emerging drug breakthrough as well as disease control paradigms. Bioinformatics presents computer experts with unparalleled challenges and opportunities. Present scientists as well as designers in bioinformatics face these challenges: one) integrating and extracting biological data; two) representing, managing, and reasoning regarding biological data; three) integrating biological knowledge management as well as biological find process; four) studying large scale biology in an interdisciplinary environment; and eventually five) allowing the discovery of encyclopedic biological knowledge.



**Mr Moka Vinod**  
M.Tech (CSE), [Ph.D]  
Associate Professor, BRECW.

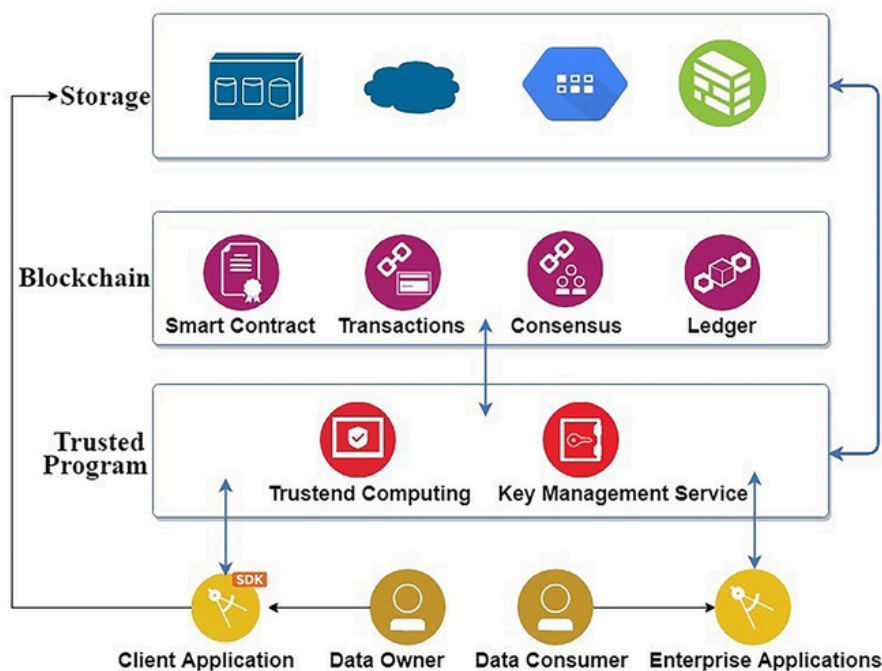
# STUDENT CONTRIBUTION

## Blockchain in IoT Security

### Abstract:

Blockchain shows a huge prospective in the coming future. It is a technology that provides the possibility of generating and sharing transaction ledgers that are tamper proof. Use cases of Blockchain are enlarging in numbers and width in multiple areas like, Internet of Things (IoT), finance and security. Even though many public and private sectors are introducing this technology, it remains a fear to others due to their lack of familiarity and the point of it not taking any big role in any major security enterprises till now. In this paper we will explain what is a blockchain and define its characteristics, benefits, and the differences between them. And help in choosing the suitable type that accommodates your needs. Then we present the immutability aspect of blockchain and its benefits and compare it with a traditional database. And finally, we will discuss blockchain security (For public and private blockchains) and compare it with a standard cyber security environment and discuss both of them in different cyber-attack scenarios.

### System Architecture



By:

18321A0504- A Akshitha

18321A0522- E Harshita Sharma



# STUDENT CONTRIBUTION

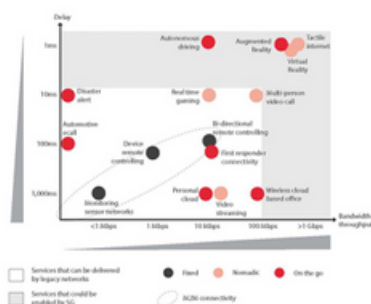
## 5G and BEYOND TECHNOLOGY ROADMAP

### Abstract:

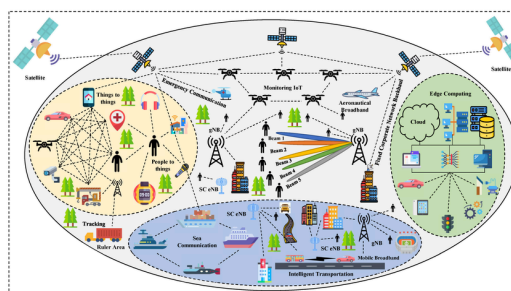
Technologies for 5G and future generations of connectivity, when deployed in the 2020s, will provide higher bandwidth and lower latency than current-generation 4G technology. "5G and Beyond" will enable bandwidth in excess of 100s of Megabits per second (Mb/s) with latency of less than 1 millisecond (ms), as well as provide connectivity to billions of devices. Most importantly, these technologies are expected to enable fundamentally new applications that will transform the way humanity lives, works, and engages with its environment.

The members and societies of IEEE recognize the disruptive nature of technologies enabling the IEEE 5G and Beyond vision, as well as the substantial technical barriers to its realization. Consequently, IEEE is developing a technical community to foster exchange of ideas, sharing of research, setting of standards, and identification, development, and maturation of system drivers, system specifications, use cases, and supported applications. One of the first activities of our IEEE 5G Initiative is the formation of a working group around a future-networks roadmap, with emphasis toward 5G and Beyond technologies and a charter to develop a white paper summarizing the challenges and opportunities in building and sustaining a 5G and Beyond ecosystem. With the release of this white paper, our attention turns to developing a comprehensive IEEE 5G and Beyond Technology Roadmap to help guide operators, regulators, manufacturers, researchers, and other interested parties involved in developing the 5G and Beyond ecosystem. Once released, the IEEE 5G and Beyond Technology Roadmap will be periodically updated with forecasts for three-, five-, and 10-year horizons.

### Graph



### System Architecture



By:

18321A0552- B Nikshiptha  
18321A0550- Ch Nikhitha

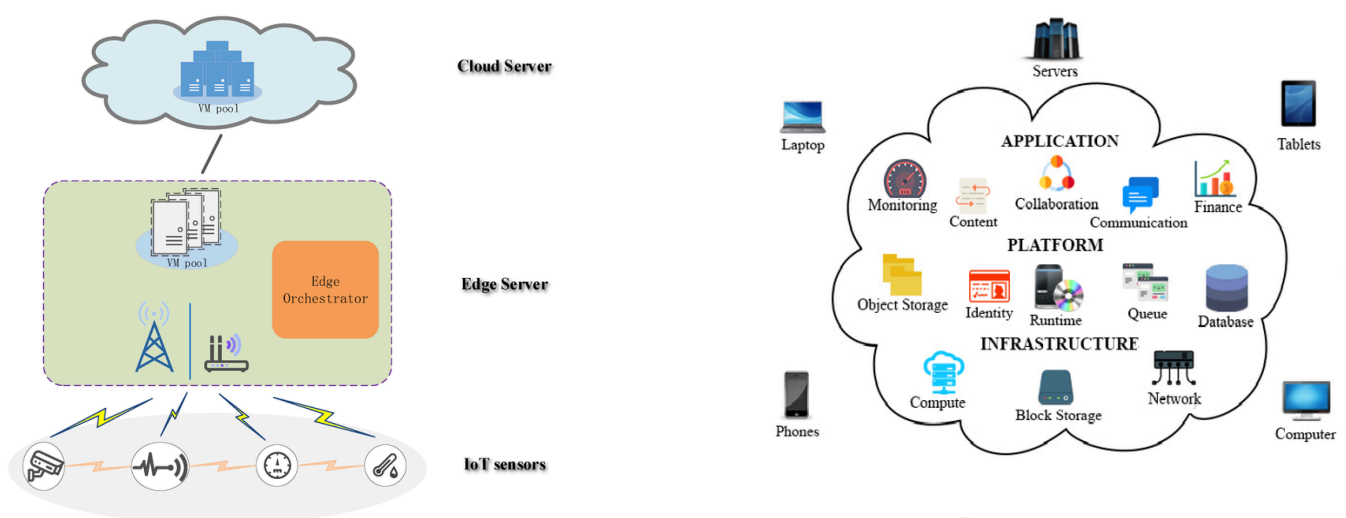
# STUDENT CONTRIBUTION

## Cloud Computing Architecture

### Abstract:

Cloud computing has evolved to emerge the most topical IT paradigm in recent times. Cloud computing is rapidly transforming the IT landscape. On a pay-as-you-use basis, cloud consumers can access resources, applications and infrastructure provided by cloud providers. Such access could be in form of applications already deployed by cloud providers for use by the cloud users. It could be in form of the capability to develop and deploy user applications using services of a cloud provider. In addition, massive storage infrastructure is available for database and data supplied by the user. The cloud has several unique architectures and many more are still evolving. The primary ones are the SaaS, PaaS and the IaaS that can be deployed on private, public, community and hybrid clouds. This paper examines present developments in the cloud computing architecture and presents guidance for additional research. Papers published in journals, conferences, white papers were analyzed. The objective of this present work is to identify, examine and explain the current trends and development in cloud computing architecture. However, only 13% of the papers examined discussed Others-as-a-Service, while only 26% of the papers reviewed considered issues relating to the major actors involved in cloud computing. This will be beneficial to cloud providers, users, and researchers alike

### System Architecture



By:

16321A0523- R Chandana

16321A0556- D Niharika Sai

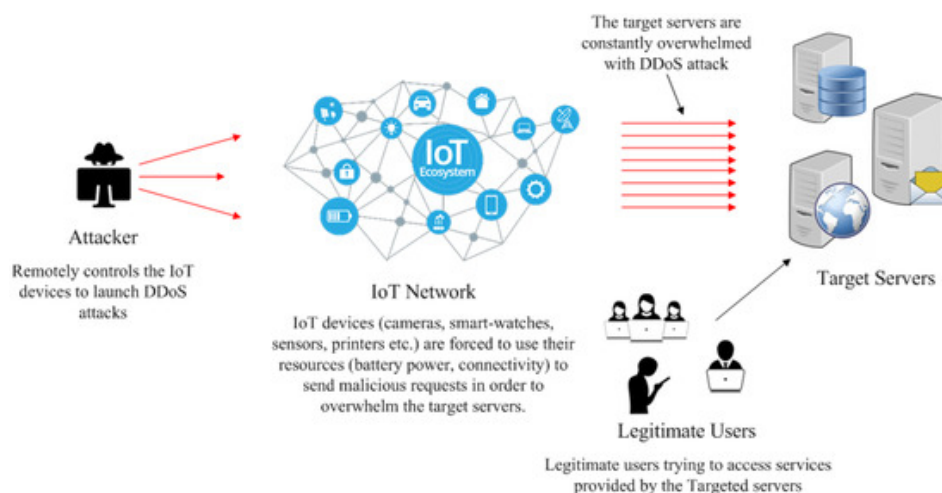
# STUDENT CONTRIBUTION

## A Detection Mechanism for Internal Attacks on Pull-based P2P Streaming Systems

### Abstract:

Online streaming is a popular service for data-intensive applications such as video streaming. P2P-based streaming solutions are advocated to help reduce costs for both providers and users. Yet, involving users over data dissemination entails security risks including a variety of denial-of-service attacks. While extensive research exists on mitigating varied attack types, their effectiveness is limited if the attacker can infer information about the topology such as the identity of nodes that have direct connections to the source. The attacker can then leverage the gained insights to place malicious participants in prominent positions. By dropping chunks that should be forwarded, the malicious peers degrade the performance in a stealthy way that does not raise suspicion. We first demonstrate the feasibility of conducting such attacks. Accordingly, we propose a detection mechanism that identifies the attack and removes potential malicious peers from their disruptive positions. We ascertain, theoretically and through simulations, that malicious peers cannot misuse the detection mechanism to gain influence. Our simulation-based study indicates that the proposed detection mechanism is able to detect malicious peers with up to 80-90% accuracy while inducing a small overhead of approximately 8%.

### System Architecture



By:

17321A0501- S Aashritha

17321A0515- D Bhavani

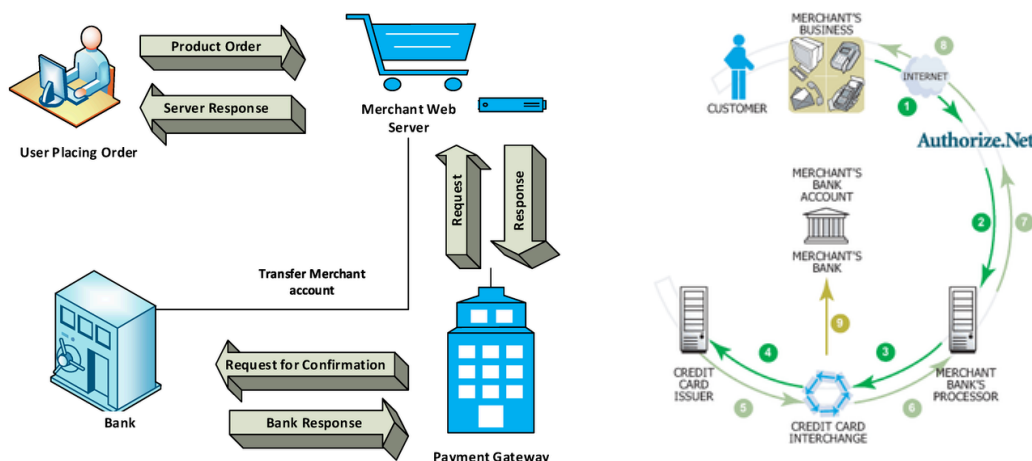
# STUDENT CONTRIBUTION

## Online E-Commerce Fraud: A Large-Scale Detection and Analysis

### Abstract:

Nowadays, e-commerce has become prevalent world-wide. With the big success of e-commerce, many malicious promotion services also rise: with the goal of increasing sales, malicious merchants attempt to promote their target items by illegally optimizing the search results using fake visits, purchases, etc. In this paper, we study the fraud detection problem on large-scale e-commerce platforms. First, we develop an efficient and scalable AnTi-Fraud system (ATF) to detect e-commerce frauds for large-scale e-commerce platforms, and implement it in parallel on a large-scale computing platform, called Open Data Processing Service (ODPS). Then, we evaluate ATF using two real large-scale e-commerce datasets (with tens of millions users and items). The results demonstrate that both the precision and the recall of ATF can achieve 0.97+, which suggests that ATF is very effective. More importantly, we deploy ATF on the Taobao platform of Alibaba, which is one of the world's largest e-commerce platforms. The evaluation results show that ATF can also achieve an accuracy of 98.16% on Taobao, which again suggests that ATF is very effective and deployable in practice. Our study in this paper is expected to shed light on defending against online frauds for practical e-commerce platforms.

### System Architecture



By:

16321A0589- A Sowmya

16321A0591- C Spandana

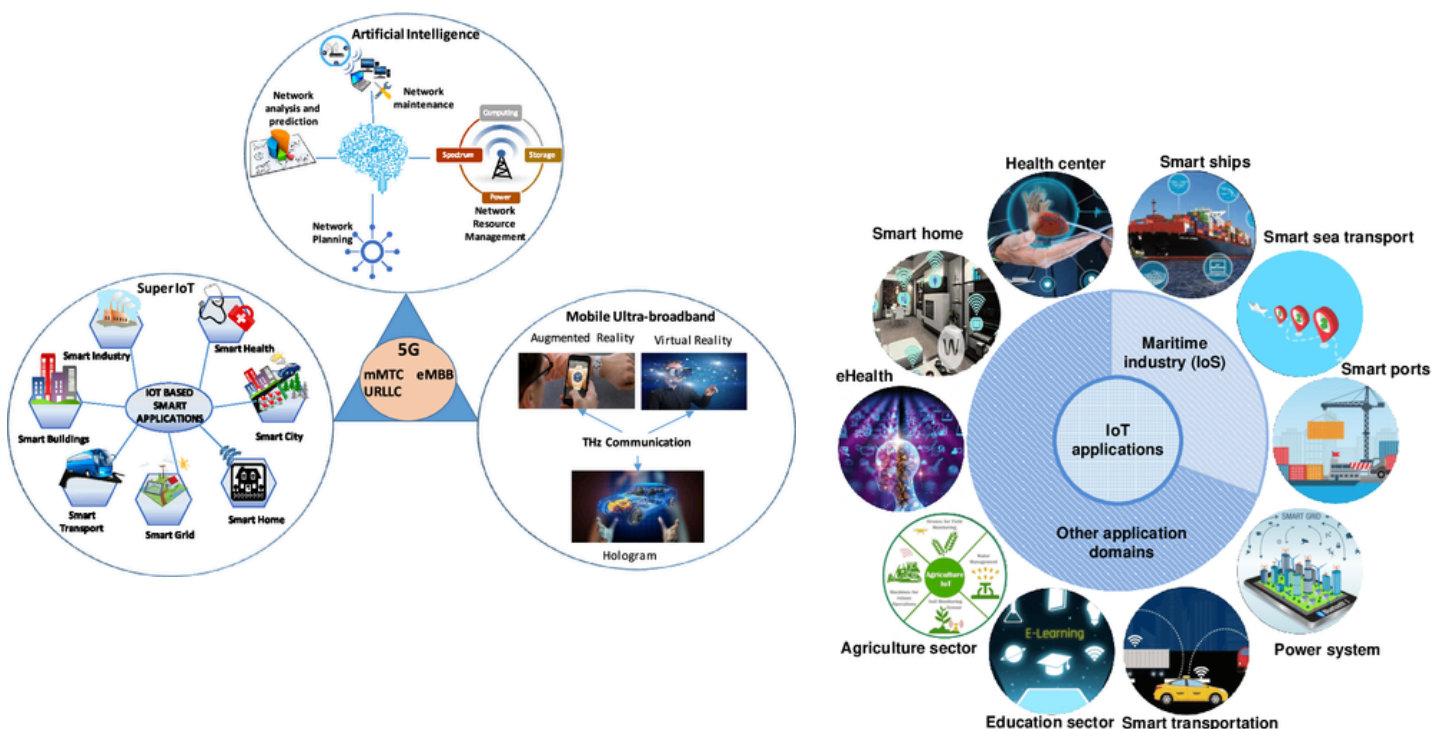
# STUDENT CONTRIBUTION

## Networking Technologies for IoT

### Abstract:

In IoT, the connectivity among various “Things” is indispensable. New requirements concerning these connections have been specified in addition to those of legacy networked services. For example, requirements of transmission performance, resilience, security and safety, and some operation issues have been discussed to configure networks accommodating IoT services. Therefore, to deploy IoT services, communication networks should adapt to these requirements. This paper identifies IoT service scenarios, and then classifies networks technologies focusing on deployment of these IoT service scenarios to some topics.

### System Architecture



By:

16321A05C0- Yashra Nazneen

17325A0516- N Shalini



# STUDENT AND STAFF CONTRIBUTION

## Smart India Hackathon-March 2019



**Organisers**  
MHRD, MIC, PREUSCENT

**Partners**  
Cisco, DEVNET, Deloitte, KPIT

**Communication Partner**  
S

**Nodal Center**  
IIT Bhilai

**IIT Bhilai**  
Hosts  
**GRAND FINALE**  
of  
**World's Biggest Hackathon**

**SOFTWARE EDITION**  
2<sup>nd</sup> & 3<sup>rd</sup> March 2019

**IIT Bhilai**  
GEC Campus, Sejbahar, Chhattisgarh  
Official Nodal Center  
Smart India Hackathon

Shri. Narendra Modi  
Hon'ble Prime Minister  
Government of India

Shri. Prakash Javadekar  
Hon'ble Minister of HRD,  
Government of India

### Introduction:

Smart India Hackathon is a nationwide initiative to provide students with a platform to solve some of the pressing problems we face in our daily lives, and thus inculcate a culture of product innovation and a mindset of problem-solving.

### Purpose:

Hackathons bring people with technical backgrounds together for problem-solving and developing new ideas. Hackathons can help participants hone their IT skills, meet people and work with others in their field.

### Benefits:

- Ingenious. Harnessing creativity and expertise of students, academicians and visionaries.
- Engaging. Sparking institute-level hackathons, fueling imagination.
- Futuristic. Building funnel for 'Start-up India' campaign.
- Collaborating. Crowdsourcing intelligence for improving governance and quality of life
- Empowering.

# Smart India Hackathon-March 2019

## Abstract:

Creating a web application that provides a platform for the spatial pattern of extraction of groundwater for industrial uses. It can be accessed by industrialists through search engines to categorize themselves according to the usage of ground water by them. And to have knowledge about the extraction of ground water in particular area. Collection of information about the usage of ground water, of various industries is put together to categorize them according to the usage and spatial pattern of extraction ground water is provided for industrial purpose. This website is useful for regulating withdrawal of ground water resource up to up to permissible levels. And this website is also useful to show the impact of over utilization of ground water. This website helps in sustainable development and management of ground water resources of the country.

**Ministry Name:** Central Ministry

**Problem Statement:** Distribution of groundwater intensive industries

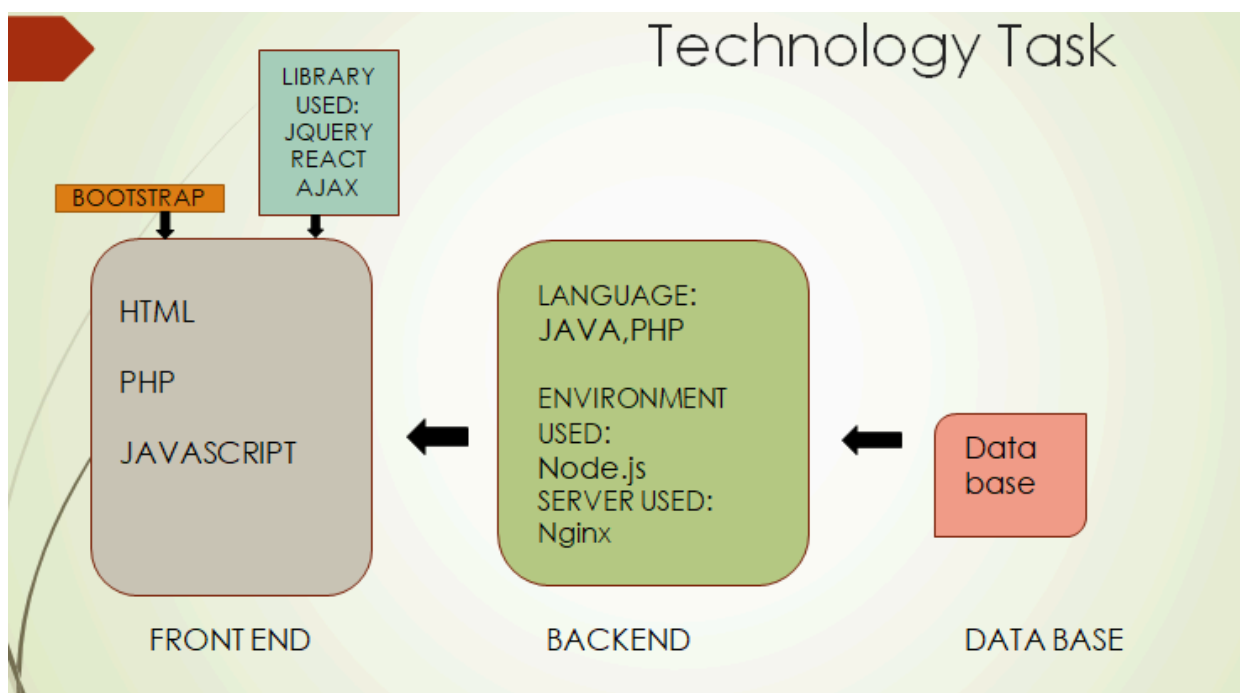
**Team Name:** VISION\_QUEST1.0

**Team Leader Name:** Duggi Niharika Sai

**Team Members:** C Aishwarya Reddy, R Chandana, Sai, Ch Geethika, K Gayathri, N Bhagyalakshmi

**Team Mentors:** M Vineela, P Sumalatha

**College Code:** 1-3514129977



# Smart India Hackathon-March 2019

## Dependencies:

- The industrialist and government(CWGA) are inter-dependent on each other for providing the problem statement and the solution idea respectively.
- For fetching the data from database , the dependency lies on Nginx server. Frontend and Backend are primarily implemented using Node.js run-time environment.

## Show Stopper:

Website might be dependent on government for authentication of corporate for checking their “Official Registration Number” in the central data.

## Vision\_Quest 1.0 Team with Mentors



**Mentors:** M Vineela, P Sumalatha

**Participants Left to Right-** C Aishwarya Reddy, R Chandana, D Niharika Sai, Ch Geethika, K Gayathri, N Bhagyalakshmi





# Code Verification and Result Analysis



## Sample Certificate & Valedictory Function



## Prize Winners of Smart India Hackathon-2019



**Academic Year: 2018-19**

**Volume 1**



# Sparkles



## **Magazine Details :**

### **Editors:**

**Chief Editor:** Mr G Dayakar Reddy

**Faculty Editor:** Ms P Sumalatha

### **Student Editors:**

Ms A Sowmya-16321A0589

Ms R Chandana-16321A0523

Ms A Akshitha-18321A0504

**MAGAZINE**

**TECHNICAL**