



MAGAZINE

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Department of

CSE

Byte Quest



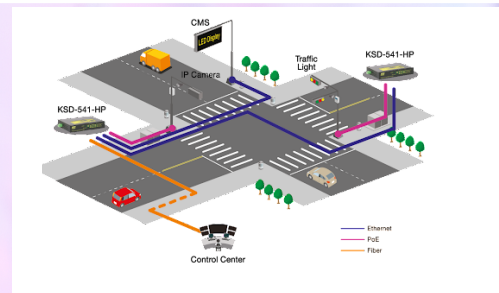
EDGE COMPUTING



ROBOTIC PROCESS AUTOMATION(RPA)



CLOUD COMPUTING



DENSITY-BASED TRAFFIC LIGHT SYSTEM

Department Vision

To be a center for academic excellence in the field of Computer Science and Engineering education to enable graduates to be ethical and competent professionals.

Department Mission

To enable students to develop logic and problem solving approach that will help build their careers in the innovative field of computing and provide creative solutions for the benefit of society.

FACULTY COORDINATORS

S. KOMAL KAUR (ASST. PROFESSOR)
T. NISHITHA (ASST. PROFESSOR)

4TH YEAR

K. ANISHA(CSE-B)
ABHINAV (CSE-A)

3RD YEAR

AKASH(CSE-C)
IMRAN MIRZA(CSE-A)
NISCHALA (CSE-B)

2ND YEAR

CHANDRASHEKAR(CSE-B)
SATWIKA(CSE-A)
VARUN(CSE-C)
TARUN KRISHNA(CSE-B)

STUDENT COORDINATORS



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HOW DOES NETFLIX WORK?

Due to the pandemic and the theatres being closed, people have turned towards OTT platforms. One such OTT platform which has a massive user base of 203.66 million across the globe and streams content seamlessly to all its users without failing is Netflix. There was a time when companies used to build their software architectures in a monolithic fashion, and even for small changes the entire system had to be taken down for a few moments and redeployed. This leads to less scalability and maintainability and restricts the usage of multiple technology stacks. At such a time Netflix was the first company to migrate its application from monolithic to a cloud based microservices architecture which means that each application will work as a micro service and have resources of its own and not share resources with other applications. Also a micro service can easily be changed without affecting the entire system. By using cloud, additional resources could be configured within minutes and that's how Netflix successfully built a very maintainable, scalable and secure system. Netflix successfully migrated its whole application onto AWS cloud by December 2011 and revolutionized the way big applications could be built in a way they could be easily maintained and scaled at ease.



EDGE COMPUTING

Edge computing is a distributed computing framework that brings enterprise applications closer to data sources such as IoT devices or local edge servers rather than relying on the central locations. Gartner estimates that by 2025, 75% of data will be processed outside the traditional data centers or cloud. It is transforming the way data is being handled, processed, and delivered from millions of devices around the world. This is done so that data, especially real-time data, does not suffer latency issues that can affect an application's performance. Many IoT devices generate enormous amounts of data during the course of their operations. These edge devices can include many different things, such as an IoT sensor, an employee's notebook computer, their latest smartphone. The biggest benefit of edge computing is the ability to process and store data faster, enabling for more efficient real-time applications that are critical to companies.





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CLOUD COMPUTING

Cloud computing is the delivery of on-demand computing services from applications to storage and processing power, typically over the internet and on a pay-as-you-go basis. Cloud computing means that instead of all the computer hardware and software you're using sitting on your desktop, or somewhere inside your company's network, it's provided for you as a

service by another company and accessed over the Internet, usually in a completely seamless way. Exactly where the hardware and software is located and how it all works doesn't matter to you, the user, it's just somewhere up in the nebulous "cloud" that the Internet represents. Cloud computing is the on-demand availability of computer system resources, especially data storage and computing power, without direct active management by the user. The term is generally used to describe data centres available to many users over the Internet. Large clouds, predominant today, often have functions distributed over multiple locations from central servers. If the connection to the user is relatively close, it may be designated an edge server.

Rather than owning their own computing infrastructure or data centres, companies can rent access to anything from applications to storage from a cloud service provider. One benefit of using cloud computing services is that firms can avoid the upfront cost and complexity of owning and maintaining their own IT infrastructure, and instead simply pay for what they use, when they use it. In turn, providers of cloud computing services can benefit from significant economies of scale by delivering the same services to a wide range of customers.

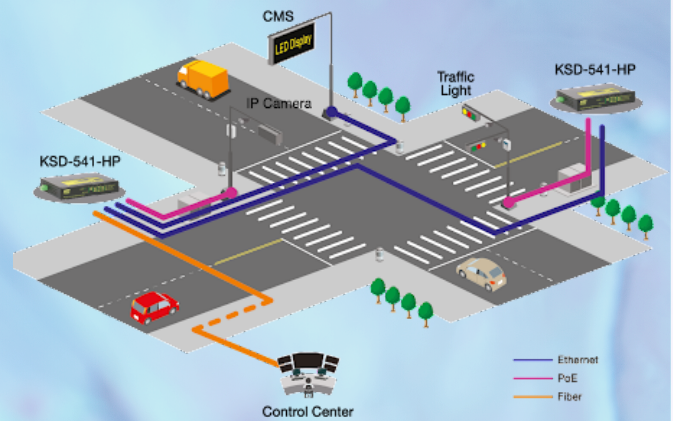




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DENSITY-BASED TRAFFIC LIGHT SYSTEM

Nowadays, controlling the traffic becomes major issue because of rapid increase in automobiles and also because of large time delays between traffic lights. So, in order to rectify this problem, we will go for density-based traffic lights system. This article explains you how to control the traffic based on density. In this system, we will use IR sensors to measure the traffic density.



In this system, we will use IR sensors to measure the traffic density. We have to arrange one IR sensor for each road; these sensors always sense the traffic on that particular road. All these sensors are interfaced to the microcontroller. Based on these sensors, controller detects the traffic and controls the traffic system. By this we can save considerable amount of time and we can avoid unnecessary occurrence of traffic jam which causes public inconvenience and there is no need of traffic police at the junctions for supervising the traffic to run smoothly. In practice presently in India we are following Time based traffic light system which we are experiencing a heavy traffic jams all over which in turns consume a lot of time and fuel. We hope this method will be adopted as soon as possible so that the limitations which we are experiencing with present method can be overcome.

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**Department of
Computer Science and Engineering
Vasavi College of Engineering**