Najiya Naj

PhD Scholar, IIITD
Email: najiyan@iiitd.ac.in

Github: Najiya-08
Web: najiya.github.io/
LinkedIn: linkedin.com/in/najiya08

Research Interest

My research explores systems and networks, focusing on wireless communication and IoT systems. I work on improving network performance and applying machine learning to address communication challenges.

Education

Dec 2022 **Pursuing PhD**, Systems and Network Lab, Indraprastha Institute of Information Technology, Delhi, ***CGPA 8.55***.

Coursework: Wireless Network, Mobile Computing, Object Oriented Programming and Design, Machine Learning and Research Methodology.

2019 - 2021 **Master of Engineering in Information Technology**, Goa College of Engineering, Goa, 85.31%, ***CGPA 8.96***

2014 - 2018 **Bachelor of Engineering in Computer Science**, Vishwavidyalaya Engineering College Ambikapur, Chattishgarh, 83.71%, ***CGPA 8.8***, (**Graduated with honors**)

Experience

2023 - 2024 **Teaching Assistant**, Indraprastha Institute of Information Technology, Delhi (Fundamentals of Database Systems, Advanced Programming, Mobile Computing)

2021 - 2022 **Assistant Professor**, Computer Science Engineering, Chandigarh University, Punjab (Programming in C and C++)

Honors and Scholarships

2022 - 2026 **PhD**, Received the AICTE Doctoral Fellowship (ADF) for a 4-years PhD program.

2019 - 2021 **Master of Engineering**, Received AICTE PG scholarship for 2-years master program.

2019 **GATE**, Qualified Graduate Aptitude Test in Engineering

Publications

- Naj, Najiya, and Amogh Sanzgiri. "An IoT based real-time monitoring of water quality system." Proceedings of the International Conference on IoT Based Control Networks & Intelligent Systems-ICICNIS. 2021.
- Naj, Najiya, and Pinto, M. "Deployment of Traffic Control Management System using IoV", International Journal of Emerging Technologies and Innovative Research (www.jetir.org), ISSN:2349-5162, Vol.8, Issue 4, page no.683-691, April-2021.

Skills

- **Programming:** C, C++, Java, Python
- **Tools:** Android Studio, Git, Docker, Visual Studio Code, Eclipse
- **Miscellaneous:** Algorithms, Data Structures, Problem Solving

Current projects

- **Remote Operation of Vehicles Over Satellite Networks:**
  The project deals with the study how to control self-driving cars from a distance. Specifically, investigating the video quality versus latency tradeoff, as well as prioritizing the video feed remotely according to the head movement of the teleoperator and also determining which parts of the video are most crucial for the remote operator to see and make decisions.

- **Cloud-Assisted Autonomous Driving Over Wireless Network:**
  Cloud-assisted autonomous driving aims to overcome challenges like reliability and hardware costs by integrating cloud-based control or guidance systems. However, existing simulation tools often lack cloud data retrieval capabilities, requiring substantial system-building efforts. This work discusses key design decisions and proposed approaches, aiming to enhance traffic safety and reduce congestion in transportation.

- **Web Measurement for Transfer Size and Page Load Time Analysis:**
  Propose a solution enabling mobile devices to perform better without depending on external factors by analysing factors affecting web page performance on mobile devices and propose solutions to improve users' mobile web browsing experience. Optimizing the performance on mobile devices by addressing factors like transfer size and page load time, ultimately enhancing the mobile browsing experience.

Master's Projects

- **An IoT based Real-Time Monitoring of Water Quality System:**
  The model uses IoT for real-time monitoring of water quality in aquaculture, detecting parameters like pH, turbidity, and temperature for aquatic species' safety. It enhances traditional methods with instant data collection, analysis, and alerts for prompt action. Sensors send data to the cloud through ThingSpeak, triggering notifications to owners via IFTTT applets.

- **Deployment of Traffic Control Management System using IoV:**
  Urban mobility is enhanced by integrating IoT into vehicles, forming the Internet of Vehicles (IoV). IoV enables vehicles to communicate with each other and the environment, improving traffic management and safety. The paper focuses on using sensors to analyze traffic patterns, prevent accidents, and ensure passenger safety.