Ravish Badgujar

Software Engineer

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Education

- **Indian Institute of Technology, Ropar** *Punjab, India*
  Bachelor of Technology in Electrical Engineering *2020- 2024*
  - **Relevant courses taken:** Advanced Algorithms, Operating Systems, Computer Networking, Database Management Systems, Deep Learning for Computer Vision, Probability and Stochastic Processes

Technical Skills

- **Programming Languages**: C/C++, Python, HTML5, CSS3, JavaScript, SQL, MATLAB
- **Tools/Frameworks/Libraries**: Bootstrap, Flutter, Express.js, Node.js, MongoDB, React.js, Next.js
- **Key Skills**: Object Oriented Programming, DSA (Leetcode), Logical Reasoning

Projects

- **Friendify - A socializing app that brings new people together.** *Nov 2022 - Jan 2023*
  Node.js | Express.js | Flutter | MongoDB **Github**
  - Developed a secure socializing platform that connects users with similar interests, facilitating easy and safe online interactions.
  - Enhanced security and user experience through email verification, verified profile tags, and a rating system to minimize fraud and impersonation while promoting meaningful interactions.

- **Smart Vehicle Mobility** *Aug 2023 - Dec 2023*
  Flutter | Google Firebase | Firestore Database | Cloud Messaging **Github**
  - Developed a responsive application utilizing geo-fencing to notify pedestrians and vehicles of proximity and track live locations, preventing trajectory intercept collisions.
  - Leveraged Firestore NoSQL database and Firebase Authentication to map, store, and retrieve user coordinates, speed, and direction for real-time collision alerts.
  - Established a communication hub using Adalm Pluto SDR, Matlab Interface, and AltBeacon/iBeacon plugins to facilitate the exchange of custom payloads as BLE PDUs.

- **E-Commerce Website** *June 2023 - July 2023*
  React | Next.js | Stripe | CSS **Github**
  - Built a responsive full-stack e-commerce application using React, integrating Stripe API for payment functionality, CMS-based product management, and advanced cart features.
  - Utilized advanced React practices, including hooks and refs, to enhance application performance and user experience.
  - Implemented file-based routing, data fetching for server-side rendering, and static generation using Next.js for optimized back-end endpoint performance.

- **UCP ChampSimulator** *April 2022 - May 2022*
  C++ | ChampSim | OOP **Github**
  - Simulated cache partitioning for multi-core processors to explore efficient on-chip cache management among multiple applications.
  - Implemented Dynamic Set Sampling and Utility Monitoring circuits to monitor and optimize each application's cache utility.
  - Successfully simulated various trace files at different sampling rates, achieving targeted performance outcomes.

Experience

- **KSTPS** *Rajasthan*
  Power Systems Intern *June 2023 - July 2023*
  - Conducted thorough analysis and troubleshooting of power systems, identifying and resolving issues to enhance system reliability and prevent downtime.
  - Developed systematic testing procedures, proposing solutions that improved equipment performance and lifespan.
  - Adapted to diverse electrical systems and technologies, demonstrating strong analytical and problem-solving skills.

Positions of Responsibility

- **Coordinator**, Coding Club, IIT Ropar *2022 - 2023*
- **Core Team Member**, Zeitgeist, IIT Ropar *2023*

Miscellaneous

- **National Talent Search Organisation**, qualified among the top 5,000 out of 1 million participants. *2017*
- **SOF National Cyber Olympiad**, secured a global rank of 416 among millions of students. *2016*
- **National Science Olympiad**, received a Gold Medal of Excellence. *2015*
- **Coding ninjas**, received an Excellence Certificate in Data Structures and Algorithms in C++. *2022*