Farouq Syed Abdali

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Education

Carleton University Ottawa, ON

Bachelor of Computer Mathematics *Sep. 2022 – Apr. 2027*

- **Activities**: Carleton Student Engineering Society, Carleton Planetary Robotics Team, IEEE, Systems and Computer Engineering Society
- **Relevant Coursework**: Discrete Structures I & II, Data Structures and Algorithms, Linear Algebra

Technical Skills

Languages: Java, Python, JavaScript, TypeScript, C, MySQL, HTML/CSS
Frameworks: React, Node.js
Developer Tools : ArcGIS, Git, Docker, Google Firebase, VS Code, Visual Studio, PyCharm, IntelliJ IDEA, Eclipse
Certifications: Microsoft Azure AI Fundamentals

Experience

Software Developer Sep 2018 – June 2022

FIRST Robotics Club *Mississauga, ON*

- Led the software team in optimizing joystick and motor control APIs using **Java**, boosting robot response time by 30% for real-time adjustments against 100+ teams in competitive matches.
- Implemented object-oriented programming (OOP) methodologies to enhance modular application frameworks, achieving a 40% improvement in code reusability and a 30% increase in system scalability.
- Directed the use of **Git** for version control to efficiently track software iterations, facilitating collaborative development across a team of 50+ software developers.
- Crafted a user-friendly dashboard that improved operational efficiency by 50%, enabling drivers and engineers to monitor real-time robot performance metrics, leading to a 20% increase in decision-making speed.

Projects

Peer-to-Peer (P2P) File Sharing System | *Python, Socket, Network Architecture* September 2024 – Present

- Designed and developed a distributed Peer-to-Peer (P2P) file-sharing system utilizing the TCP/IP networking stack, enabling decentralized file transfers across 10+ nodes without a central server.
- Leveraged multi-threading to process **50+** concurrent file transfer requests, enhancing network efficiency and maintaining high performance under load.
- Implemented dynamic peer management, allowing nodes to join or leave the network within 2 seconds, and maintaining a peer list for **10+** peers through real-time broadcasting.
- Developed efficient file chunking and reassembly, splitting large files into 512-byte chunks for optimized transfer, ensuring 0% data loss during reassembly.

Full Stack Point of Sale (POS) System | *Javascript, React, MySQL, Node.js* Dec 2023 – Present

- Developed a responsive full-stack POS web application using **React** for the frontend and **Node.js/Express** for the backend, resulting in a 25% increase in transaction processing speed.
- Designed and managed a **SQL database** for efficient handling of transactions, product management, and administrative functions.
- Engineered a Firebase-based security module enabling **AES and JWT** for robust user authentication and admin control, supporting 1,000+ profiles for enhanced access management and operational efficiency.
- Enabled seamless product and transaction management through the development of 20+ API endpoints, reducing data retrieval times by 50%.

React Chat App | *Javascript, React, Node.js, Firebase* Apr. 2023 – May 2023

- Engineered a real-time chat application using **React** for the front-end and **Node.js** for back-end API services.
- Leveraged **Firebase** for sophisticated user authentication and live data handling, enabling real-time messaging and session management for 150+ active users without compromising performance.
- Crafted a responsive UI with React, enhancing user experience and interactivity across various devices and platforms.
- Adopted comprehensive Git workflows for version control, optimizing team collaboration and code quality, which resulted in a 30% faster feature development cycle and enhanced code stability across releases.