

Farouq Syed Abdali

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EDUCATION

Carleton University

Ottawa, ON

Bachelor of Engineering, Software Engineering with Co-op

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

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

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.

Sudoku Solver | *Java, Swing, Algorithms*

May 2023 – May 2023

- Architected a Sudoku solver application in **Java**, featuring a Swing-based GUI for interactive puzzle input and solution display, providing an engaging user interface that supports input for thousands of puzzle configurations.
- Implemented **backtracking algorithms** to achieve an 80% improvement in puzzle-solving efficiency and designed a user-friendly interface for ease of use.
- Developed comprehensive validation checks to ensure 100% of entered puzzles are solvable
- Integrated a feature to generate random Sudoku puzzles of various difficulty levels, adding over 1,000 unique puzzle configurations to engage users, thereby increasing application utility and user session times.

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, TypeScript, C, MySQL, HTML/CSS

Frameworks: React, Node.js

Developer Tools: Git, Docker, Google Firebase, VS Code, Visual Studio, PyCharm, IntelliJ IDEA, Eclipse

Libraries: OpenCV, NumPy, Axios