Jawahar Babu Selvaraj

Software Engineer

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EDUCATION

- **Carleton University** — Sep 2023 - Apr 2025
  Master of Engineering in Software Engineering (Engineering Practice)

- **Government College of Technology - Anna University** — Aug 2017 - Apr 2021
  Bachelor of Engineering in Electronics and Communications; CGPA: 8.60

EXPERIENCE

- **Bosch Global Software Technologies** — July 2022 - July 2023
  Software Engineer in Application Development
  - Developed software applications for Android, IoS, desktop and web platforms in Flutter, aligning with industry standards.
  - Collaborated with interdisciplinary teams and implemented interfaces between C Algorithms and Flutter apps, enhancing communication for sensor data processing.
  - Implemented a Communication plugin in Flutter which establishes and maintains communication between the sensor and the mobile application. The plugin supports both Bluetooth LE and Serial Communication.
  - Developed applications in adherence with SOLID and Clean Coding principles.
  - Designed and maintained Continuous Integration and Delivery pipelines in Jenkins with Groovy scripting for multiple software applications.
  - Refactored multiple legacy monolithic applications into microservices and reused the microservices in various applications. This reduced Code duplication and shrunk the codebase size by upto 20%.
  - Experienced working with Git version control and project management tools like Jira and Confluence.
  - Was a valuable part of my team's Agile SDLC and significantly contributed to sprint planning and retrospectives.

- **Bosch Global Software Technologies** — July 2021 - June 2022
  Testing and Automation Engineer
  - Conducted UI/UX and Black-Box testing for mobile applications and embedded algorithm libraries.
  - Interacted with different testing teams to design suitable test plans for the applications to thoroughly analyse their performance in different test conditions.
  - Developed an Automated testing library in Python, drastically improving embedded algorithms' validation and verification productivity. This library was then integrated into a robotic arm, removing the need for manual testing and reducing the testing time by almost 75%
  - Developed and performed Unit, Widget and Integration tests for Flutter mobile applications and generated reports regarding the apps' performance.
  - Performed static and dynamic code analysis using tools like Clang and Sonarqube to identify bugs, code smells, vulnerabilities and cyclomatic complexity.

- **Bosch Global Software Technologies** — March 2021 - June 2021
  Project Trainee
  - Developed a Deep learning image classifier in Python to detect defective sensors and to automate manual sensor inspection, thereby speeding up the manufacturing process.
  - Trained a variational autoencoder-based semi-supervised model with image processing techniques in TensorFlow to build a state-of-the-art classifier with 92% accuracy.

- **Pinesphere Solutions** — January 2021 - March 2021
  Intern in Full stack Web Development
  - Developed a Home Automation Web Application, enabling clients to communicate digitally with home appliances.
  - Used Angular JS front-end and Java's Spring Boot Endpoint APIs with PostgreSQL database.
  - Experienced building modular Angular Components and Spring Boot microservices,
  - Procured hands-on experience in Database modelling, hibernate ORM and Rest API.
  - Worked with AWS cloud (EC2 and S3) to deploy static and dynamic websites.

- **Freelancer** — January 2020 - March 2021
  Web Developer
  - Designed and developed multiple web applications such as e-commerce websites and web portals in Django and Angular Js with MongoDB for local businesses.
  - Gained knowledge working with MVC architecture and no SQL databases.

Skills

- **Languages**:   Java, Python, Dart, C, SQL, JavaScript, R
- **Frameworks**:   Spring Boot, Flutter, Django, TensorFlow, AngularJS, Git, Docker, Jenkins, Unity3D, Linux OS, PostgreSQL, MongoDB, MS Office, UML
- **Cloud**:   AWS EC2, AWS S3
- **Software**:   Web and Mobile Application Development, Object-Oriented Design, Data Structures and Algorithms, Software Design Principles, Database design and Development, Software Testing and Debugging, Data Science, Machine Learning, DevOps and Agile SDLC

Accomplishments

- "Best Tyro" awarded by my manager at Bosch for my exceptional performance and new initiatives in my workplace as a beginner. (2022)

- "Extra Miler" awarded by my tech lead at Bosch for going out of my project scope, supporting in development and delivery of Web BLE Plugin. (2023)

- one of the youngest to make a Business trip to the headquarters at Stuttgart, Germany to work on a project in collaboration with algorithm developers (2023).

- Was a part of the development team for a mobile application which was presented at CES, Las Vegas on behalf of Bosch SensorTec (2022).