

John Victor Stephen Durairaj

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EDUCATION

Dalhousie University

Bachelor of Applied Computer Science; Minor in Business;

Halifax, Nova Scotia

Jan.2022 – Apr.2026

WORK EXPERIENCE

Software and Robotics Engineering Student

Automation and Robotics Team | Enginuity Inc.

Halifax, Canada

Jan 2024 – Apr 2024

- Deployed services using **Docker** for consistent development and deployment environments.
- Developed and deployed infrastructure as code (IaC) using **Ansible** to streamline setup and configuration management.
- Streamlined test bench setup and testing using **shell scripts**, improving efficiency.
- Developed and deployed a rolling variance algorithm in **C++** that reduced error rates by **90%** in linear actuator software.
- Proficient in utilizing **Linux operating systems** for daily operational tasks and complex problem-solving.
- Developed **Python** scripts and used **Node-RED** to streamline **IoT data management**.
- Built the **system design and software architecture** for generators' initializing Modbus TCP/IP communication, ensuring reliable and efficient communication protocols.
- Collaborated with **cross-functional teams** to ensure seamless integration of automated workflows and infrastructure management.

PROJECTS

Project Management Tool | ReactJS, Spring Boot, JPA, JUnit, REST APIs | GITHUB

Summer 2023

- Developed a full-stack project management tool using **React JS**, Redux, and Material-UI for the front end.
- Implemented a robust backend with **Spring Boot** and **JPA**, integrating **MySQL** for database management.
- Created multiple **RESTful API** endpoints to manage user authentication, project boards, tasks, and workspaces
- Utilized Java and applied **Model View Adapter** architecture in accordance with **SOLID principles**.
- Streamlined development with **GitLab CI/CD pipelines** for automating builds, tests, and deployments.
- Enhanced code quality and reduced bugs by implementing **JUnit automated tests**.

Pirate Brain-Computer Integration | Python, Firebase, Jenkins, Pygame, NoSQL

Present

- Implemented **Firebase** (NoSQL) database for real-time data storage in a Python-based brain-computer integration game.
- Developed **CRUD** functionalities for the game base, ensuring efficient data management and manipulation.
- Integrated **Jenkins CI/CD** pipeline to automate builds, tests, and deployments, enhancing development efficiency.
- Utilized Python virtual environments and Miniconda for isolated and reproducible development setups.
- Utilized **Agile Methodology** and Atlassian tools, including Confluence for documentation and **Jira** for task Management.

Purchase Order Management System | React.js, Node.js, MySQL, RDBMS, RESTful API, Postman

Present

- Developed a Purchase Order Management System integrating **React** and **Express.js** with a **MySQL** database.
- Implemented **RESTful API** endpoints using **Node.js** and Express.js for efficient data processing and reporting.
- Designed normalized MySQL tables with appropriate foreign key constraints for improved database efficiency.
- Enhanced user experience by utilizing **React Router DOM** and Axios for dynamic content rendering and API communication.

Sales Insights Data Analysis | SQL, PowerBI, DAX

Fall 2023

- Increased sales efficiency by 20% by developing a **real-time Power BI dashboard**, reducing reporting time by 25%.
- Improved data accuracy by 30% using SQL to analyze over **20,000** transactions in a MySQL database.
- Enhanced user satisfaction by 15% through building, monitoring, and maintaining data **ETL pipelines** for comprehensive data processing.

SKILLS

Programming: Java , Python, JavaScript , C# , HTML , CSS , SQL

Frameworks / Web technologies: NextJS, React JS, Node JS, Three JS, PHP, SpringBoot, Django JUnit

Database / Tools: MySQL, MongoDB, Firebase, Supabase, Git/GitHub, Postman, Jira, REST APIs, PowerBI

Infrastructure: Docker, Ansible, Scripting (Python/Bash), CI/CD (Cloud Build, Gitlab), AWS (EC2, S3), GCP

Others: Microservices architecture, Software development Life Cycle (SDLC), software design, implementation, and testing, Computer networks