John Park

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Education

McGill University **September 2019 – May 2024**

Bachelor of Engineering in Software Engineering *Montreal, Quebec*

Relevant Coursework: *Software Engineering Practice, Capstone Design Project, Software Delivery, Database Systems*

Technical Skills

Programming Languages: Python, Java, C, HTML/CSS, JavaScript, SQL
Developer Tools: VS Code, Eclipse, Webots, Android Studio
Technologies/Frameworks: Linux, GitHub, JUnit, Vue.js, React
Languages: English (Native), French (Advanced), Korean (Beginner)

Experience

Ciena Corporation **May 2023 – May 2024**

OPS Lab Eng Stations Support *Saint-Laurent, Montreal*

- Developed a budget management web application using **React.js** and **Spring Boot**.
- Implemented a responsive and user-friendly visualization interface using **React.js**, with **KendoReact UI** elements.
- Developed the backend using **Java Spring Boot**, implementing robust **APIs** and **business logic** for data storage.
- Managed and optimized a **Microsoft SQL Server** database to ensure efficient data storage and retrieval.
- Maintained the web application by adding new functionalities and improving existing features.
- Reduced project budget input time by 40% through an intuitive user interface and streamlined data entry process
- Enhanced **data security** by integrating **role-based access control**, ensuring only authorized personnel could modify sensitive budgetary information.

Projects

Vision-guided Navigation Assistance for the Visually Impaired **McGill University, Fall 2023 - Winter 2024**

- Developed a smart device-based navigation system to assist the visually impaired community in urban environments.
- Trained and optimized a **YOLO-based image classification model**, achieving up to 90% accuracy in detecting bus shelters under various lighting and weather conditions.
- Processed and labeled over 4,000 frames of bus shelters and 2,000 background images containing objects similar to bus shelters (e.g., gazebos, window frames, backlit posters, etc) for training the **machine learning model**.
- Implemented a mobile solution using an iPhone, delivering audio and haptic feedback to guide users to bus shelters.

PourDecisions Website | *JavaScript, HTML, CSS* **McGill University, Winter 2021**

- Designed and developed a cocktail recipe generator application using the **MERN stack** (**MongoDB**, **Express**, **React**, and **Node.js**).
- Implemented the frontend using **React** to build a user-friendly and interactive interface.
- Developed a **search functionality** to allow users to search for cocktails based on ingredients, alcohol type, and more.
- Built a **RESTful API** using **Express.js** to handle user authentication and to interact with the database.

Library Management Website | *Java, Spring Framework, Vue.js, Android Studio* **McGill University, Fall 2021**

- Implemented a full-stack application for a **library management system** to allow users to search and borrow items.
- Developed a **test suite** to validate the application and resolve bugs to improve user experience.
- Integrated a **responsive and user-friendly interface** using **HTML**, **CSS**, **JavaScript** and **Vue.js** for the frontend.
- Utilized **Java** and **Spring** on the backend to handle **user authentication**, **database management**, and **API** creation.
- Built and maintained a **PostgreSQL database** to store library and user information.

Autonomous Robot | *Java, Webots, LeoCAD* **McGill University, Fall 2020**

- Designed a virtual autonomous robot for a university competition using **Webots** and **LeoCAD**.
- Implemented **control algorithms** in **Java** to enable the robot to navigate and perform various tasks.
- Utilized various **sensors** to gather information about the robot's environment.
- Implemented **obstacle avoidance techniques** to enable the robot to navigate through a complex environment.
- Tested and fine-tuned the robot's behavior to improve its performance in competition.