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, Jupyter Notebook
Technologies/Frameworks: Linux, GitHub, JUnit, Vue.js, React, Scikit-learn, Pandas, Numpy
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.
- 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

League of Legends eSports Matches Predictor | *Python, Pandas, Scikit-learn*   **Personal Project, 2024**

- Developed a machine learning model using **Python** and libraries like **scikit-learn** and **pandas** to predict the outcomes of League of Legends eSports matches with over **90% accuracy**.
- Collected and preprocessed data from Kaggle datasets, cleaning over **3,700 rows** of match data to improve model reliability.
- Documented the entire development process, including data collection, preprocessing, and model evaluation, to ensure reproducibility and transparency.
- Engineered predictive features such as team performance metrics, and in-game objectvies to train the Random Forest Classifier and improve match outcome predictions.

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.