Jordan Lau

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Education

University of Ottawa   September 2021 - Present

Honours Bachelor of Science in Computer Science and Minor in Linguistics.
- CGPA of 9.68 (10-point scale).
- Key skills learned: data science techniques in **Python**, machine learning techniques with **TensorFlow** and **Keras** in **Python,** and frontend design with UX principles in mind using **Node.js** and **React**.

Skills

- **Python, Java, C++, C, R, Go, TypeScript** and **JavaScript.**
- **NumPy**, **Pandas**, **MatPlotLib**, **Keras**, **TailWindCSS, Node.js**, **ExpressJS**, **Vue.js** and **React**.
- **HTML, CSS, SQL** (Postgres) and **MongoDB** (CLI and Atlas)**.**
- **Linux, VSCode**, **Azure DevOps**, **Jira** and **Git** (Git Bash, GitHub and GitLab).
- **Agile** development.
- B2 proficiency in **French** (CEFR scale).
- Excellent communication and teamwork skills.

Work Experience

Government of Canada, Finance   May - August 2024

Student Software Developer
- Worked with **Git**, **Azure DevOps**, **Vue.js** and **TailWindCSS** to help develop LLM application.
- Worked in the whole development cycle for several front-end features and bugs: independently identifying issues, creating tickets in **DevOps**, researching and developing the solutions in **JavaScript** with **Vue.js**, ensuring that solutions met business requirements, publishing branches and submitting **Git** PRs to the dev environment using **DevOps**.
- Applied UX principles in development of solutions, such as improved code snippet copy buttons that help the user identify exactly what code they are copying.
- Performed research on code libraries and APIs to add support for different file types, including PDF.

Government of Canada, National Defence   September - December 2023

Student Software Developer
- Researched several antivirus software providers and dozens of software versions to develop analytics for the Government's Threat Surface dashboard.
- Implemented these analytics in **Python** scripts and stored data in a **MongoDB** database.
- Tracked tickets using **Jira** kanban board and participated in code review for pull requests on **GitLab**.
- Automated scripts using **Concourse CI/CD**.
- Programmed using the **Linux** ecosystem.

uOttawa Engineering Outreach   May - August 2023

Bilingual Instructor
- Led STEM camps and developed activities. Topics included **JavaScript** and **Python**.

Projects

Personal Website
- Personal website to showcase myself as a student, tutor and programmer.
- Written with **HTML**, **Bootstrap**, **JavaScript** and **JQuery**. Hosted with **GitHub** Pages.
- Improved usability by studying feedback from a variety of users.
- Available in English and French.

Hand Gesture Detection
- Trained Neural Network with **Keras** on more than 145,000 images of hands from HaGRID (a varied open source dataset) to classify 29 gestures.
- Preprocesses data using **Google AI**'s Mediapipe Hand Landmarking.
- Performs live hand detection and prediction via webcam using **OpenCV**.
- Source code written in **Python**, with **Pandas**, **NumPy** and **SKLearn** libraries.
- Achieved 85 to 90% accuracy on the validation dataset.

Google vs DeepL Experiment
- Self-directed experiment comparing the difference in translations done by Google Translate API with DeepL API for a large English to French dataset. Early results show that the services are highly similar.
- Uses two metrics: modified version of Levenshtein Distance and METEOR, which I have implemented in **C++** to improve speed on large texts. Text is pre-tokenized (with the **HuggingFace** transformers library) for better accuracy.
- Written in **Python** using **NumPy**, **Pandas** and **MatPlotLib**.
- Contains unit tests using **Python**'s native test library.

Hotel Management App
- Team project for CSI 2132 allowing users to book rooms in hotels from various chains and locations. Written with **HTML**, **CSS**, **TypeScript** and **DaisyUI**.
- Database implemented with **PostGreSQL**. Front-end hosted with **React**. Back-end hosted with **ExpressJS**.

Awards

University of Ottawa   September 2022 - Present
Merit Scholarship
- Valued at $1000 per semester.

Canadian Hearing Services   August 2021 and August 2023
National Scholarship
- Valued at $3000 per year. Declined in 2023 in order to accept an internship.

University of Ottawa   September 2021
Entrance Scholarship
- Valued at $4000.