SHUAI (VINCENT) ZHU

(+1) 647-861-6833 | vincent.zhu@mail.utoronto.ca | linkedin.com/in/shuai-zhu/ | github.com/Vincentzs | vincentzs.github.io/Shuai-Zhu/

EDUCATION

University of Toronto St.George   **Sep 2019 - Apr 2024 (PEY/Coop)**
Bachelor of Science in Computer Science   **Toronto, Canada**

- **Relevant Courses:** Data Structures & Algorithms, Software Design, Databases, UI/UX, Web Programming, Software Engineering, Operating Systems, Statistics, Machine Learning, Neural Networks & Deep Learning, Software Ethics, Innovation & Entrepreneurship
- **Clubs:** You're Next Career Network, UofT Machine Intelligence Student Team, UofT Artificial Intelligence, UofT Google Developer Student Club, UofT Hacks, UofT Kendo Club
- **Hackathons:** Google Developers Solution Challenge: 2022, Hack the Globe: 2023, UofTHacks IX, X, XI: 2022-2024
- **Achievements: $4000** John W. Browne Award: 2023, Top 3 Actuarial Students' National Association Case Competition: 2022

SKILLS

Programming Languages: Python, Java, HTML, CSS, Javascript, Typescript, SQL, Latex
Fullstack Frameworks: React, React Native, Node, Flask, Django, PostgreSQL, Tailwind, Bootstrap, Cucumber
Machine Learning Libraries: PyTorch, Tensorflow, NumPy, Pandas, Scikit-learn, Matplotlib
Tools: Git, Github, Gitlab, Firebase, Google Cloud, Google Colab, Docker, Postman, Figma, Expo, Vercel, Netlify, Heroku

EXPERIENCE

Lee Lab | **Project Lead Developer (Supervision: Prof. Annie En-Shiun Lee)**   **Dec 2023 – Present**

- Lead **three** engineers in the development of a Hokkien Translation App using **Expo, React Native, Node.js, Native Base, & Firebase**.
- App provided **5 Models** to assist users: Text Translation, Sentence Generation, Hokkien Romanizer, Text to Image, & Text to Speech.
- Designed an optimized **Firebase No-SQL database schema**, minimizing redundant data operations and image storage costs.
- Prof. Lee offered **fully funded $15,000+ thesis based Master** of Computer Science at Ontario Tech Univeristy **Vector Institute Recognized**.
- **Research Paper submitted** to NAACL 2024 Workshop.

You're Next Career Network | **Software Engineer**   **Apr 2023 – Present**

- Developed a Google Maps inspired **career fair venue map** with **React, React-Spring, Bootstrap, & Docker**, featuring a location info panel. Utilized by **4,500+ students/11,000+ visits** and **109+ companies** (**$155,000+** Revenue) during Fall 2023 and Winter 2024 Career Fair Week.
- Integrated **user authentication** with **email/password, Google auth, LinkedIn OAuth2** for **37000+ visitors** using **Firebase** and **React**.
- Implemented email/password sign-ups with an **email verification link** and personalized user experience with **onboarding information**.

UofT Machine Intelligence Student Team | **Cloud Developer**   **Sep 2023 – Present**

- Contributed to **Kubernetes open-source** cloud infrastructure projects by resolving existing issues.
- Assisted in planning and executing a series of cloud/open source workshops in collaboration with IEEE UofT.

GR4LLM | **Research Assistant (Supervision: Prof. Eric Yu & Vik Pant - Chief Data Scientist @ PWC)**   **Sep 2023 – Dec 2023**

- The selection and adoption of large language models (LLMs) for applications present a significant challenge for contemporary enterprises.
- Conducted goal-oriented requirements engineering for large language models (**LLMs**) and provided a structured approach to assess LLM suitability in various contexts. Inspired by **GR4ML** with three modelling views: Business, Analytics Design, and Data Preparation.
- Evaluated and visualized the positive and negative contribution of **10+ LLM metrics** (e.g. perplexity) from reviewing **39 academic papers**.

Veeva Systems (NYSE: VEEV) | **Software Engineer in Test Intern**   **May 2022 – Apr 2023**

- Led the development of a data validation automation tool using **Java**, saving **2,800 workdays/yr** in data creation and productivity.
- Developed **145** automation tests using **Java & Cucumber**, resulting in improved software quality and reduction in testing time by **80%**.
- Utilized Agile methodology and boosted personal productivity by **24 days/yr**.
- Explored AI chatbot solutions with **Dialogflow**, **React** and **Node**, targeting to reduce onboarding time for new hires.

Korotu Technology | **Software Engineer**   **Jan 2023 – Apr 2023**

- Directed a team of six developers in engineering a **tree species classification mobile app** using **Expo, React Native, Node, Express, Parse, Tensorflow, & Jest**, deployed backend to **Heroku**, and ML model to **Azure ML**.
- Contributed as **Scrum master**, **frontend**, and **ML engineer**. Built front-end camera, image library, and deployed TensorFlow model.
- Offered **2 ML classifications**: PlantID API and custom ML using Google's Mobile Plants classification model and iNaturalist plant dataset.
- Assisted forest conservation with user-driven tree species identification and data collection, reducing costs and expanding forest coverage.

PROJECTS

Pigeon: UofT Hacks XI | **React, Preline, Tailwind, Python, Flask, Selenium, OpenAI, Cohere**   **Jan 2024 – Jan 2024**

- Built a nostalgic social media web app, with the user's handwritten font (Selenium) displayed in letters (Cohere: 8 styles of English) and post-cards (Dalle: Postcard Image).

WaterBNB | **HTML, CSS, JS, React, SQlite, Python, Django**   **Jan 2023 – Apr 2023**

- Developed an **Airbnb replica** with Token-based Authentication, User Profile, Notification, Comment, Rating, Reservation, Property, Search and Filter, and Pagination.