Stone Yang

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EDUCATION

University of Toronto **Sep 2022 - Present**

Bachelor of Applied Science in Engineering Science | Robotics Engineering Major

- 2x Dean's Honour List
- **Courses:** Data Structures and Algorithms, Object Oriented Programming, Digital & Computer Systems, Calculus, Linear Algebra, Probability and Statistics, Ordinary Differential Equations

SKILLS

Languages: Python, C, Java, MATLAB, Arduino, SystemVerilog, RISC-V Assembly, R, HTML, CSS, JavaScript, TypeScript

Tools/Frameworks: TensorFlow, PyTorch, Keras, Slurm, React, NextJS, Django, PostgreSQL, Git/Github, Figma, OpenCV, Mediapipe, YOLOv8, NumPy, Pandas, Matplotlib, Scikit-learn, SciPy, LaTeX

EXPERIENCE

Sunnybrook Research Institute **May 2024 - Present**

Machine Learning Intern | Software Developer and Analyst *May 2024 - Aug 2024*

- Developed an ML model with **Python** & **TensorFlow** to detect wear/nonwear in actigraphy devices with **97% accuracy** across **4000+** patients. Automated workflows and reduced data processing time by **20x.**
- Collaborated on an ML model to predict sleep/wake from actigraphy data across **500+** patients. Improved model generalizability by **20%** by optimizing input features and fine-tuning signal extraction processes
- Built signal processing and data analysis programs with **Python and R**; managed workloads with **Slurm**

Machine Learning Engineer | Part-time Researcher *Aug 2024 - Present*

- Optimized performance of wear-detection ML model through hyperparameter tuning and cross validation with **Python, TensorFlow & Keras**
- Enhanced model generalizability by training an ensemble model through boosting to improve performance on problematic outliers by **90%**
- Preparing findings for publication, contributing advancements to wearable sensor data analysis

UofT Web Dev | Canadian Institute for Theoretical Astrophysics (CITA) **Jan 2024 - May 2024**

Full-stack Developer

- Developed a website with **React** & **NextJS** to provide information on current satellites in the CITA system
- Implemented and styled **5+** web components utilizing various libraries (SplideJS, SwiperJS)

PROJECTS

Wave **Oct 2023 - Feb 2024**

- Developed a **Python** computer vision program with **OpenCV** that allows users to control their computers through hand gestures
- Engineered a machine learning model using **TensorFlow and Keras**, achieving **95% accuracy** in recognizing **20+** distinct hand signs and actions

ChefGPT **Nov 2023 - Dec 2023**

- Utilized **YOLOv8** and **GPT-4-Vision API** to develop an app that generates food recipes based on photos of the user's fridge