Stone Yang

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EDUCATION

University of Toronto **September 2022 - Present**

- Candidate for a Bachelor of Applied Science in Engineering Science, Machine Intelligence Major, 2x Dean's Honour List
- Relevant Coursework: Calculus I, II, Vector Calculus, Data Structures and Algorithms, Object Oriented Programming, Digital & Computer Systems, Linear Algebra, Ordinary Differential Equations, Engineering Design (Praxis)

PROJECTS

Wave (*Personal Project)* **Oct 2023 - Present**

- Developed a computer vision program with Python that allows users to control their computers through hand gestures.
- Engineered, trained, and tested a Feed-Forward Neural Network using TensorFlow and Keras, achieving proficiency (95% accuracy) in recognizing over 20 distinct hand signs and actions.
- Currently exploring alternative model architectures (LTSM, CNN) to improve model performance for complex gestures

ChefGPT (*Personal Project)* **Oct 2023 - Present**

- Utilized YOLOv8 and GPT-4-Vision API to develop an app that generates food recipes based on photos of the user's fridge.
- Currently building a hosting web page with HTML, CSS, Django, and PostgreSQL

PlanIt (*Personal Project)* **Sept 2023 - Present**

- Created a minimalist Calendar/To-Do app; constructed the user interface with HTML, CSS, and JavaScript.
- Developed the backend infrastructure using Django and PostgreSQL.

CLUBS/EXTRACURRICULARS

UTFR (University of Toronto Formula Racing) ***(Deep Learning and Perception Member)*** **Sept 2023 - Present**

- Worked with ROS to implement objection detection algorithms to detect racetrack obstacles.
- Implemented functions to analyze and compare LiDAR and stereo-depth data.

Generative AI Artist (*Self-employed)* **May 2023 - Aug 2023**

- Utilized Stable Diffusion 1.5 with various LoRA and Textual Inversion models to engineer prompts and generate AI artwork. Styles varied from cartoon to hyperrealistic
- Trained LoRA models from 100+ pictures using Kohya; commissioned by 30+ clients to create custom AI images

Physics Club (*Co-founder)* **Sept 2021 - Apr 2022**

- Managed club logistics such as funding, promotion, and events; grew the club to over 70 members.
- Hosted weekly meetings and taught topic-area workshops on theoretical knowledge and practical skills (CAD, programming, etc.)
- Led sponsorship and funding efforts to finance activities; selected as the recipient of a $1500 LabRoots STEM Scholarship.

International Young Physicists' Tournament (IYPT) ***(Competitive Team Member)*** **June 2020 - Sept 2020**

- Selected as a member of a five-person team representing Canada to compete at the international level; won first place
- Collaborated with team members to develop and test hypotheses on advanced physics problems; set up robust experiments via 3D modeling and printing, woodwork and metalwork, and programmed electronics (Arduinos, stepper motors, etc.).

SKILLS

Programming: Python, C, Java, HTML, CSS, JavaScript, MATLAB, Arduino, SystemVerilog, RISC-V Assembly

Tools/Frameworks: Django, PostgreSQL, TensorFlow, Stable Diffusion, Autodesk Inventor, Fusion 360, Cura, COMSOL Multiphysics, Microsoft Word, Excel, Powerpoint, Modelsim