# Stone Yang

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## EDUCATION

**University of Toronto** **September 2022 - Present**

*Bachelor of Applied Science in Engineering Science | Machine Intelligence Major*

- 2x Dean's Honour List
- **Relevant Coursework:** Data Structures and Algorithms, Object Oriented Programming, Digital & Computer Systems, Calculus I, II, Vector Calculus, Linear Algebra, Ordinary Differential Equations, Engineering Design (Praxis)

## PROJECTS

**Wave** **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 machine learning algorithm with 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** **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** **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 and hosted the webpage with Vercel and Railway.
- Currently implementing AI/ML algorithms with PyTorch to create "smart calendaring" functionalities.

## EXPERIENCE

**UTFR (University of Toronto Formula Racing)** **Sept 2023 - Present**

*Deep Learning and Perception Member*

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

**Generative AI Artist** **May 2023 - Aug 2023**

*Self-employed*

- 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** **Sept 2021 - Apr 2022**

*Co-founder*

- 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

## SKILLS

- **Programming:** Python, C, Java, HTML, CSS, JavaScript, TypeScript, MATLAB, Arduino, SystemVerilog, RISC-V Assembly
- **Tools/Frameworks**: React, Django, PostgreSQL, Git/Github, Figma, TensorFlow, Vercel, Railway, Stable Diffusion, Autodesk Inventor, Fusion 360, Cura, COMSOL Multiphysics, Microsoft Word, Excel, Powerpoint, Modelsim