JESSICA TANG

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https://jessicaxtang.github.io/

Languages: Python, C++, C, MATLAB, HTML, CSS, JavaScript

EDUCATION

University of Toronto — Sept 2022 - Present
Bachelor of Applied Science in Engineering Science (Machine Intelligence)
Computer Programming, Data Structures & Algorithms, Linear Algebra, Calculus I & II

Simon Fraser University — Sept 2021 - Apr 2022
Grade 12 Concurrent Enrollment: Introduction to Computer Programming I & II

EXPERIENCE

University of Maryland Medical Intelligent Imaging Center | *Researcher* — Nov 2022 - Present
- Onboarding for a project in detection and classification with medical imaging AI datasets using deep learning
- Conducting research literature review

aUToronto | *Mapping Team Developer* — Sept 2022 - Present
- Building a self-driving car, maintaining, updating, and testing large Python codebase to automate HD maps for various outdoor environments with JOSM

Memorial Sloan Kettering Cancer Centre | *Student Researcher* — Jan 2021 - Dec 2021
- Researched motif discovery in mRNA translation for targeted therapy in Lymphoma
- Used suffix trees to improve efficiency and neural networks to predict changes in transcript levels

PROJECTS & AWARDS

Articulator (2023)
- Translating speech to sign language to bridge barriers for the hearing-impaired. Developed with Cohere, utilized 6 AI models to recognize, detoxify, analyze sentiment, and launch result.
- Best Project Overall **and** winner of Cohere challenge **out of 90 participants** (NSBE Hacks)

Fracture (2023)
- Detecting cervical spinal fracture from CT scans and predicting fracture location through segmentation masks, to reduce hospital wait time for patients.
- First Place Winner (Toronto Health Datathon)

RotaSat (2022)
- Designed and built a can-sized satellite with a radio data transmitter and active attitude control system. Developed the ground control system software and post-launch data analysis.
- International Top Final Report **out of 25 countries** (European Space Agency CanSat Competition)
- National Top Project (Canadian CanSat Design Challenge)

Deep Reinforcement Learning Controller for Indoor Farming (2021)
- Implemented and trained a Deep Q-Learning Neural Network for the autonomous controller, employing the experience replay memory technique.
- Conference-published paper **and** Best Presenter (International Student Conference On Artificial Intelligence)
- National Finalist (Ingenious+ Innovation Competition 2022)
- Provincial Top 5 Finalist (BC Youth Innovation Showcase 2021)
- Provincial Top Project: Greenhouse Growers' Award (BC/Yukon Science Fair 2021)

Facial Emotion Recognition Model using Classification and Convolutional Neural Networks (2020)
- Classified images dataset using various classification algorithms, a convolutional neural network, and implemented the trained model in real time applications.