

# JESSICA TANG

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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 Student: Introduction to Computer Programming I & II, 3.84 GPA

## 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 on research papers
- 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

### 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. Finalist of the European CanSat Competition, winner of 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 at International Student Conference On Artificial Intelligence (Nanyang Technological University).

### Introduction to Artificial Intelligence Curriculum (2021)

Developed introductory AI bootcamp curriculum for high school students, implemented by Bronx School of Sciences

### 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.

## AWARDS

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|--|---|
| <b>International Top Final Report and National Winner (May 2022)</b><br>European Space Agency CanSat Competition         | <b>BC Student Achievement Scholarship (June 2022)</b>                       |
| <b>National Finalist and Provincial Winner (May 2022)</b><br>Ingenuous+ Innovation Competition                           | <b>Provincial Top 5 Finalist (May 2021)</b><br>BC Youth Innovation Showcase |
| <b>Best Presenter, Research Paper Finalist (Aug 2021)</b><br>International Student Conference On Artificial Intelligence | <b>Greenhouse Growers' Award (Apr 2021)</b><br>BC/Yukon Science Fair        |

## LEADERSHIP

- IlluminAIte Academy | Founder and President** \_\_\_\_\_ Aug 2020 - Present  
Lead team of 15, worked to increase accessibility to free AI education, organized 10 events/workshops, garnered 275+ participants from 42 cities and 11 countries, two-time grant award recipient. Pioneered organizing first high school AI Ethics Competition in North America
- Project Tech Conferences | Co-President** \_\_\_\_\_ Aug 2020 - Aug 2022  
Oversaw team of 7 executives, planned and organized 5 STEM conferences and hackathons featuring 23 industry professional speakers, sponsored by 9 tech companies, reached 200 students