Anthony Tan

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EDUCATION

McGill University **Sept. 2021 – May 2024 (anticipated)**
Honours Bachelor of Science, Computer Science

- 4.0/4.0 GPA
- Relevant graduate courses: Applied Machine Learning), Computer Networks, Software Privacy
- Relevant undergraduate courses: Robotics and Intelligent Systems, Computer Graphics, Operating Systems, Statistics

University of Manitoba **Sept. 2019 – May 2021 (transferred)**
Honours Bachelor of Science, Computer Science

- 4.45/4.50 GPA

EXPERIENCE

McGill University Robotics Team **Sept. 2022 – Present**
Team Member

- Wrote software for an autonomous underwater vehicle (AUV) using ROS, Python, C++, and Arduino code
- Assisted in deploying and testing the AUV
- Worked with electrical engineers to integrate sensors into the robot's software system
- Created a package for publishing state measurements from an IMU
- Used CMake and Catkin to build ROS packages for the AUV

Code Ninjas Winnipeg **May 2022 – Aug. 2022**
Code Sensei

- Taught coding skills to children ages 8-13

McGill University **Jan. 2022 – Sept. 2022**
Tutor

- Independently tutored university students in math and computer science

University of Manitoba Bioinformatics Lab **May 2020 – Aug. 2020, May 2021 – Aug. 2021**
Intern

- Developed a citizen science game in Unity for solving bioinformatics problems
- Created security for a server containing experiment data using Bcrypt and JsonWebToken
- Designed and developed a frontend for the server for easy data visualization
- Used MongoDB to maintain a backend for the server
- Expanded upon a pipeline for fetching and parsing genomic data with BioPython
- Co-authored 2 papers, one of which was presented at the International Conference on the Foundations of Digital Games. Won "Best Paper Award"

PROJECTS

X-ray image classifier **Dec. 2022 - Present**

- Designed and trained a convolutional neural network to classify chest x-ray images as either pneumonia or normal

Portfolio Website **July 2022 – Aug. 2022**

- Self taught React JS, then created a portfolio website that is hosted on GitHub pages
- https://mrmondrian.github.io/portfolio/

GeSort **May 2020 – Aug 2020, May 2021 – Aug. 2021**

- A citizen science game for solving the genome sorting problem https://gesort.cs.umanitoba.ca:9001/

BOPAL 2.0 **Sept. 2021 – Aug. 2021**

- An algorithm for predicting genome ancestries in bacteria realistically using operons

SKILLS & INTERESTS

- Programming languages: Java, Python, Ocaml, C/C++/C#,
- Web development: Node JS, Mongo DB, Javasciprt/HTML/CSS, React
- Game develpment: Unity/C#
- Works well independently and in a team-setting
- English (native proficiency), French (elementary proficiency)
- Areas of interest:
    - Machine learning (Python/ScikitLearn/Tensorflow)
    - Robotics (Arduino, ROS, CMake/Catkin, Python, C++)
    - Computer graphics (OpenGL)

PUBLICATIONS

De Leon Pereira, R., Tan, A., Bunt, A., Tremblay-Savard, O. (2021) "Increasing player engagement, retention and performance through the inclusion of educational content in a citizen science game." https://dl.acm.org/doi/10.1145/3472538.3472554

Chua, M., Tan, A., Tremblay-Savard, O (2021) "BOPAL 2.0 and a study of tRNA and rRNA gene evolution in Clostridium" https://www.worldscientific.com/doi/10.1142/S0219720021400072