Joseph Yu

☎ 647-528-6378 | ✉ joseph.yu2004@gmail.com |
in www.linkedin.com/in/joseph-yskyuu/ | ⌨ YoshikuYuu

Education

University of Toronto   Sept. 2022 – May 2026
HBSc — Computer Science and Bioinformatics Specialist, Mathematics Minor   *Toronto, ON*
- **cGPA**: 3.96
- **Relevant Coursework**: CSC207: Java & Software Design (A+), CSC209: C & Systems Programming (A+), CSC263: Data Structures (A-), CSC343: SQL & Databases (A), CSC373: Algorithms (A)

University of Toronto Schools   Sept. 2018 – June 2022
High School Diploma   *Toronto, ON*

Experience

ML Research Volunteer   Mar. 2024 – Present
SickKids (PGCRL) — Yuen Lab   *Toronto, ON*
- Designed, trained, and fine-tuned a CNN-GRU model to predict the mutation rate of short tandem repeat (STR) regions within the human genome with applications in data mining and cancer research
- Built a genome data pre-processing pipeline using Bash and command line tools
- Processed, analyzed, and visualized genetic mutation data using pandas and matplotlib Python libraries for research purposes

Projects

Pomogarden: Interactive AI Pomodoro Timer ⬈ | *Python, Flask, Cohere*
- Built Python backend for a pomodoro-inspired webapp that used Cohere generative AI to provide supportive user feedback
- Hackathon project for Deerhacks 2023

Atlas Adventures ⬈ | *Java, MongoDB*
- Worked with a team to develop an educational geography quiz app in Java using BingMaps API, Java Swing, and MongoDB
- Wrote unit, integration, and end-to-end tests for the application using JUnit5, covering **600+** lines of code
- Performed code reviews on GitHub

Colony Counter | *PyTorch*
- Collected, processed, and labeled yeast colony image data from summer research project in the Alex N. Nguyen Ba Lab
- Built and trained a simple CNN using PyTorch to count the number of yeast colonies on an agar plate

Snail's Pace: AR Horror Game ⬈ | *Unity, C#, ARCore*
- Built Python backend for a pomodoro-inspired webapp that used Cohere generative AI to provide supportive user feedback
- Hackathon project for Deerhacks 2023

Skills

Languages: Python, Java, C, C#, SQL (PostgreSQL), Bash, HTML/CSS
Tools/Libraries: PyTorch, scikit-learn, pandas, numpy, matplotlib, MongoDB, Flask, pytest, JUnit 5, Conda/Mamba, Git, VS Code, Unity