

# Jen Tat

BSE student offering a strong foundation in software engineering and programming principles. Highly retentive and can quickly master new technologies. Strong troubleshooting and problem solving skills with an analytical mind. Successful and enthusiastic working in both team and self-directed settings. Able to convey information clearly and persuasively both orally and in writing.

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🐙 github.com/JenTat

## EDUCATION

### Software Engineering, Honours University of Waterloo

09/2021 - 04/2026

- President's Scholarship of Distinction

## WORK EXPERIENCE

### Computational Cancer Genomics Analyst The Hospital for Sick Children

01/2025 - 05/2025

- Built a long-read RNA-seq pipeline using **Slurm, Docker, and Python** to convert **over 2,000** paired-end FASTQ files into normalized TPM matrices.
- Designed and deployed variant discovery pipelines on HPC using **Nextflow, Docker, and Python** for **over 10,000** cancer genome samples, identifying **more than 1.2 million** candidate somatic variants with **98.6% precision**.

### Full-Stack Engineer VCT Group Inc.

05/2024 - 08/2024

- Delivered RESTful APIs using **Spring Boot and PostgreSQL** to support ERP platform functionalities, improving backend response times by **60%** under production load.
- Led front-end development from concept to MVP using **ReactJS**, enabling pilot deployment for enterprise users.

### Software Developer Euna Solutions

09/2023 - 12/2023

- Integrated REST APIs, backend services, and frontend components using **NodeJS, AngularJS, ReactJS, and MySQL** to streamline user approval workflows, reducing end-to-end processing time by **40%**.
- Converted a legacy JavaScript codebase to TypeScript, preventing **over 150** type-related bugs in pre-production environments.

### Software Developer Bonfire Interactive

01/2023 - 04/2023

- Integrated **DocuSign and Adobe Sign** into both front-end and back-end, enabling seamless e-signature workflows and improving contract turnaround times by **35%**.

### Lead Tech Specialist & Software Developer Build A Dream

05/2022 - 09/2022

- Spearheaded the development of their **first mobile app** using **ReactNative** and **first flagship website** utilizing **WordPress, custom CSS and JavaScript**.

## SKILLS

Python

Java

JavaScript

Assembly

C

C++

C#

SQL

HTML

CSS

PHP

HapiJS

NodeJS

AngularJS

ReactJS

Nextflow

Docker

Singularity

Git

Figma

AWS

Spring Boot

Slurm

MUI

## PERSONAL PROJECTS

### In All Roles, I Strive To...

- Improve old and align new front end components to be highly accessible (WCAG 2.0+ compliant).
- Remove redundant code.
- Add comments for readability.

### RTX

- Implemented a real-time executive (RTX) on the **ARM Cortex M4 microprocessor** using chip **STM32F411RE**.
- Provided a basic multi-programming environment that supports priority (via deadlines), pre-emption, and dynamic memory management.
- Developed **RTX** using **C and ARM Assembly Language**.

### Biquadris

- Created a Latinization of the game Tetris, expanded for two player competition; utilizing **C++** and **MVC**.
- Developed both a text-based display and aesthetically-pleasing graphical display of the game board.
- Produced a system that encapsulates the decision-making process by offering multiple levels of difficulty and special actions.

### User Experience Optimization Device

- Created a **Raspberry Pi** device that detects the ambient noise and brightness levels in any given environment.
- Developed an application and graphical user interface that adjusts the volume and screen brightness of the user's device to best suit the user's external conditions.
- Utilized light sensors, microphone, and various Python libraries (eg. **Tkinter, PyCaw**, etc.).

### Literary Game for Kids

- Developed an educational interactive game targeting elementary school faculty that uses data from popular children's books.
- Utilized various Python libraries (eg. **Tkinter, Python Imaging Library**, etc.).

## ORGANIZATIONS

Women in Engineering (WiE) & Women in Computer Science (WiCS) (08/2021 - Present)

Waterloo Rocketry (05/2022 - Present)

IT Advisory Board (09/2022 - Present)

LeetCode Club (09/2024 - Present)