

Travis Pan

Computer Science and Finance

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EDUCATION

University of Waterloo

Bachelor of Computing and Financial Management

Waterloo, Ontario

September 2023 – June 2028 (Expected)

EXPERIENCE

Junior Software Engineer

University of Toronto URECS

August 2022 – April 2023

Toronto, Ontario

- Developed a slime mould algorithm for the agent-based COBWEB simulation software
- Facilitated a code migration, translating legacy Java code in the COBWEB2 repository to Python
- Organized and coordinated team collaborations using Git for version control and seamless group work
- Helped develop reliable test harnesses for blackbox testing of simulations using Bayesian optimization

IT Analyst

Financial Services Regulatory Authority of Ontario

May 2024 – August 2024

Toronto, Ontario

- Maintained and enhanced frontend and backend of internal web applications (CETS, MBS) built with React and .NET, and performed regression testing with Selenium
- Created an AI chatbot for the IT portal using OpenAI's API, fine-tuning parameters for optimal performance
- Designed and optimized complex SQL queries to retrieve, analyze, and manipulate large datasets, improving data processing runtime by 30%
- Became proficient in Jira for workload organization and used Git for streamlined version control

PROJECTS

Game Stats Analyzer Webapp | *JavaScript, React, Node.js, Express.js, MongoDB*

April 2024 – August 2024

- Developed a full-stack MERN application with 100+ peak users to automatically scrape, analyze, and visualize Pokémon Showdown data using RESTful APIs
- Implemented server-side processes with Express.js and MongoDB queries using Mongoose
- Built a dynamic, optimized, and modular frontend with React

Nostalgia Playlist Generator | *React, Node.js, Express.js, OpenAI API, Auth0*

January 2024 – January 2024

- Created a nostalgic imagery/soundtrack generator for UofTHacks XI
- Designed frontend using React, Typescript, and HTML/CSS and backend using Node.js and Express.js
- Used Auth0 and Spotify API to extract playlist data and user information
- Used OpenAI API and web scraping tools to generate nostalgic imagery

Citadel Terminal One Summer Invitational Tournament | *Python, Sphinx*

June 2024 – August 2024

- Developed a Python algorithm that advanced to the quarter-finals in the Terminal One tower defense competition
- Used dynamic programming, Kruskal's algorithm, and graph theory to optimize resource use and defenses
- Leveraged Sphinx to document the Python codebase, generating readable documentation for team members

Safe Portfolio Generator | *Python, pandas, NumPy, yfinance*

October 2023 – December 2023

- Developed a low-risk, weighted portfolio generator using yfinance data that uses multithreading for efficient data processing and pandas for data organization
- Designed a volatility algorithm to determine the optimal weighting for each stock using gradient descent
- The portfolio value had a positive, low percentage change of 4.5% between Nov. 20th, 2023 and Dec. 12th, 2023

TECHNICAL SKILLS

Languages: C, C#, C++, Python, Java, JavaScript, TypeScript, HTML, CSS, Bash, SQL, PHP

Libraries & Frameworks: React, Angular, Node.js, Express.js, MongoDB, pandas, NumPy

Tools: Git, Linux, Selenium, Docker, Excel, Microsoft Office, Power BI, Jira

Certifications: AWS Cloud Practitioner