

Sunny Nie

[linkedin.com/in/sunny-nie](https://www.linkedin.com/in/sunny-nie) | github.com/sunnymnie
Coquitlam, British Columbia, Canada

EDUCATION

University of British Columbia

Vancouver, BC

Bachelor of Science in Computer Science

2020 – 2025

- Dean's Honour List with 90.4% cumulative average

TECHNICAL EXTRACURRICULAR ACTIVITY

UBC Agrobot

Sept 2021 – Present

University of British Columbia

- Translated research papers on weed detection into Python algorithms by using NumPy for fast matrix calculations and Matplotlib for image and graph visualizations
- Wrote Python scripts to transform bulk plant data into formatted train, test, and validation datasets for TensorFlow model training

PERSONAL PROJECTS

Book Summary Marketplace | *JavaScript, React, Next.js, Solidity*

Feb 2022 – Present

- Created a multi-page website with React and Next.js with Tailwind as the CSS component to host book summaries
- Initiated Metamask detection via React hooks to prompt the user to connect and to fetch the user address

Trading Algorithms | *Python, Jupyter, Pandas, NumPy, Matplotlib*

July 2021 – Present

- Designed two profitable Python trading algorithms trading either spot or futures for cryptocurrencies
- Researched possible trading strategies using NumPy, Pandas, and Matplotlib on JupyterLab to create algorithms that allow for efficient backtesting and to create informative data visualizations
- Established coordination between program, disk, and Binance API using JSON and datetime module to ensure program can reliably pick up exactly where it left off when reset
- Increased execution speeds of batch orders by 75% through the use of thread pools to execute high-leverage future trades at the best prices

Website Downloader | *Python, Selenium*

Dec 2021 – Jan 2022

- Designed a Python program to fetch and parse a website's HTML to LaTeX via BeautifulSoup and py pandoc to access hidden information
- Wait for JavaScript to load done with Selenium WebDriver to allow concealed information to render before scraping

ACADEMIC PROJECTS

UBC Dataset Query Application | *TypeScript, JavaScript, React*

Jan 2022 – Apr 2022

- Collaborated with a team of 3 to build a full-stack querying engine in TypeScript with the use of asynchronous promise-based functions to aggregate metadata on UBC courses and buildings from a complex query syntax
- Implemented a client frontend with React to call RESTful APIs from a local server using Express.js to deliver metadata to the user
- Maintained unit tests using mocha (chai) through Agile methodologies with regular sprints

Seedphrase/password manager | *Java*

July 2021 – Aug 2021

- Built a GUI using Java Swing for saving and retrieving passwords and seed-phrases
- Introduced data persistence using JSON and used the JUnit testing framework to maintain code robustness

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, Java, C/C++

Frameworks: React, Next.js, JUnit

Developer Tools: Git, VS Code, IntelliJ

Libraries: Pandas, NumPy, Matplotlib