nathancheung.site | nathancheung22@gmail.com

EDUCATION

Ryerson University

Bachelor of Engineering in Software Engineering

Dean's List: 2018 - 2020

GPA: **3.82**

PROJECTS

Youtube Video Synchronizer

https://vidshare.ca/

Exp. Apr 2022

- Developed a full-stack web application to watch YouTube videos with others synchronously
- Synchronized all user activity using Socket.io websockets and Express.js with back-end API endpoints
- Designed front-end UI using HTML, CSS, JavaScript, and Bootstrap

Handwritten Digits Classifier

http://tiny.cc/izm5tz

- Created and trained a **neural network** in **Keras** to classify handwritten digits
- Designed a full-stack web application to visualize neuron layer with **Node.js**, **React**, and **Express.js**

Automated Classifieds Bot

https://git.io/JkKfz

- Created a **Python** bot to identify high-margin listings and notify user via email
- Utilized web scraping with Beautiful Soup and Pandas to scrape listings and store data dynamically
- Automated and deployed bot using an AWS EC2 instance and email notifications with the smtp library

Password Manager

https://git.io/JkKk6

- Created a **Python** application to store and retrieve passwords securely
- Ensured security using bcrypt's Blowfish hashing algorithm with a randomly generated salt
- Encrypted passwords with AES-128-CBC encryption and PBKDF2's HMAC-SHA-256 key hashing

Sudoku Solver https://git.io/JkKJO

- Created a user-friendly application that solve Sudoku puzzles
- Implemented a **backtracking** algorithm with visualization using **pygame**

EXPERIENCE

Software Engineer Intern

IBM Canada

May 2020 - Present

- Developed a full-stack web application using TypeScript, React/Redux, and Express.js
- Constructed an end-to-end workflow testing suite to improve error catching by 70%
- Built a database monitoring bot to re-route misplaced support tickets, increasing NPS score by 30%
- Automated an internal data analytics tool to visualize support satisfaction metrics in real-time
- Deployed all applications in **Docker Containers** using **CI/CD pipelines** with **Travis CI**

Customer Experience Associate

TD Canada Trust

Aug 2019 - Apr 2020

- Granted the additional responsibility to handle secure-desk and bank vault combinations
- Complied with branch control procedures to prevent identity theft, money laundering, and fraud

TECHNICAL SKILLS

Languages: Python, JavaScript, Java, HTML, CSS, C, SQL

Tools/Technologies: Git, Node.js, TypeScript, Docker, AWS, Express.js, Travis CI, JIRA, MongoDB, Keras