

Nathan Cheung

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EDUCATION

Ryerson University

Bachelor of Engineering in Software Engineering
Dean's List: 2018 - 2021

Exp. Apr 2023
GPA: **3.90**

EXPERIENCE

IBM

Software Engineer Intern

May 2020 - Present

- Developed a mainframe application to be used by 300+ engineers in the GTS organization
- Led a team of 5 interns through pair programming, reviewing pull requests, and technical lessons
- 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 scores by 30%
- Deployed using **Docker**, **Kubernetes**, and **Travis CI** with **CI/CD pipelines** to ensure 0 downtime

LunaID

Mobile Application Developer Intern

Jan 2021 - Present

- Developed **Android** and **iOS** apps to detect insects and recommend pesticides for agricultural farmers
- Constructed a data pipeline to annotate and prepare 36GB of image data for ML model training
- Compiled and deployed mobile app to the **Apple App Store** and **Google Play Store** for enterprise use

PROJECTS

Youtube Video Synchronizer

<https://vidshare.ca>

- Developed a full-stack web application to watch YouTube videos with others synchronously
- Synchronized user activity using **websockets**, serving around 4400 monthly and 630 unique visitors

Password Manager

<https://git.io/J0mfM>

- Created a **Python CLI** to store and retrieve passwords securely
- Ensured security using **bcrypt's** hashing algorithm and **AES-128 encryption** for all data stored
- Implemented **password salting** for additional security against rainbow table attacks

AnonBoard - 4th at IBM Hackathon

<https://tiny.cc/dm56tz>

- Developed an online job board that aims to remove racial bias in the hiring process
- Utilized **computer vision** and **natural language processing** to block discriminable personal information

Automated Classifieds Bot

<https://git.io/J0mf7>

- Created a **Python** bot to identify high-margin listings and notify user via email
- Automated and deployed bot using an **AWS EC2** instance, handling email notifications with **smtp**

Handwritten Digits Classifier

<https://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**

TECHNICAL SKILLS

Languages: Python, JavaScript, Java, HTML, CSS, C, Objective-C, Bash, SQL

Tools/Technologies: Git, React/React Native, Docker, AWS, Travis CI, Postman, MongoDB, Tensorflow