

# Nathan Cheung

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## EDUCATION

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### Ryerson University

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

Exp. Apr 2023  
GPA: 3.90

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## EXPERIENCE

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### 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 4 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 app 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
- Deployed mobile app to the Apple App Store and Google Play Store for enterprise use

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## PROJECTS

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### 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/JkKk6>

- 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 - 4<sup>th</sup> 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/JkKfz>

- 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**

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## TECHNICAL SKILLS

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

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