Nathan Cheung

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EDUCATION

Ryerson University
Bachelor of Engineering in Software Engineering   Exp. Apr 2023
Dean's List: 2018 - 2021   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

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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/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 - 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/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**

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