Nathan CHEUNG

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Languages

Python, TypeScript/JavaScript, Java, C, Objective-C, SQL/NoSQL, Assembly, VHDL

Tools & Technologies Education

Docker, Kubernetes, NodeJS, React/React Native, Android Studio/Xcode, AWS, Websockets, Git

Toronto Metropolitan University, BEng. Software Engineering, 2023, GPA: 3.98



Amazon – Software Development Engineer Intern

MAY 2022 - AUG 2022

- > Developed on Cradle; an internal big data transform tool processing 1.20MM jobs/week
- > Implemented Angular.js to React migration for Cradle, improving front-end load times by 1134%
- > Architected and designed data previewing function for Cradle, reducing unnecessary AWS EC2 & S3 resources
- > Maintained Cradle's backend architecture by fixing versionset mismatches and pipeline build issues

Java React TypeScript Angular.js

IBM – Software Engineer Intern

MAY 2020 - APR 2022

- > Developed a z/OS mainframe debugger used by 300+ engineers in the GTS organization
- > Supervised a team of 5 interns through pair programming, 1:1s, code reviews, and technical lessons
- > Engineered a database monitoring bot to re-route misplaced support tickets, increasing NPS scores by 30%
- > Deployed 3 applications through cross-functional teams using CI/CD pipelines

NodeJS Python Docker Kubernetes Machine Code

LunaID – Mobile Application Developer Intern

JAN 2021 - AUG 2021

- > Developed Android and iOS apps to detect insects and recommend pesticides for agricultural farmers
- > Constructed a data pipeline to annotate large image datasets for object classification training
- > Designed web application to re-pipe user submitted images back for further CV training, increasing model accuracy by 22%
- > Compiled and deployed mobile app to the Apple App Store and Google Play Store for enterprise use React Native | Firebase | Computer Vision | Python

PROJECTS

Youtube Video Synchronizer

Website

- > Developed a full-stack web application to watch YouTube videos with others synchronously
- > Synchronized concurrent user activity using websockets, serving 5800+ unique monthly visitors from 32+ countries Websockets JavaScript NodeJS CSS

Password Manager

Github Repo

- > Created a Python password Manager CLI to securely store and retrieve passwords
- > Ensured security using the bcrypt hashing algorithm and encrypted all data using the AES-128 algorithm
- > Implemented password salting and peppering for security against brute force and rainbow table attacks

Python Encryption Hashing

Automated Classifieds Bot

Github Repo

- > Created a Python bot to identify high-margin classified listings and notify users via email
- > Automated and deployed bot using an AWS EC2 instance, handling email notifications with stmp

Python AWS Web scraping

AnonBoard - 4th at IBM Hackathon

YouTube

- > Developed an online job board that aims to remove racial bias in the hiring process
- > Utilized computer vision and natural language processing to censor discriminable personal information on a resume

Python NodeJS Computer Vision NLP