

Aryton Hoi

Software Engineer

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EDUCATION

Northeastern University, Boston, MA

Fall 2017 - May 2021

Bachelor of Science in Computer Science, Minor in Mathematics

GPA 3.74

Courses Software Development, Web Development, Database Design, Object-Oriented Design, Networks, Computer Systems, Algorithms, Programming Languages, Graph Theory, Statistics, Multivariable Calculus, Differential Equations

Awards Dean's List, University Honors Program & Scholarship, HackMIT & YaleHack Award Winner

SKILLS

Languages Python, Java, Javascript, HTML, CSS, MySQL, Matlab, C/C++

Tools Git, React/Redux, Node.js, Firebase, Jenkins, AWS S3, Django, Google Cloud, Tensorflow, Keras, Prometheus, Figma

WORK EXPERIENCE

Develop For Good

Software Engineer & Product Manager, Volunteer

Sept 2020 - Jan 2021

- Built hospital staff website for IE11 using **React**, **Node.js**, and **Firebase** to improve internal information access and distribution
- Designed and developed scalable GDrive-style folder system with efficient path retrieval in NoSQL database
- Improved information search experience by caching common lookups and implementing prefix-tree based autocomplete
- Implemented auto image-resizing with Sharp and pre-upload image preview with **JavaScript** to reduce storage and loadtimes
- Managed 5 part-time volunteer designers and developers to ship website in 12 weeks

BitSight

Software Engineer, Co-op

May 2020 - Dec 2020

- Built automated metric scraping and visualization tool using **Python**, **Jenkins**, **AWS S3**, **Prometheus**, and **Grafana**
- Led redesign and development of **Django** test classes, validation library, and **OpenAPI** documentation to improve scalability and maintainability of APIs
- Reduced daily Kubernetes cronJob runtime by **3.5 hours** by optimizing Django query of API logs
- Contributed to runtime reduction of Django test suite by **50%** by eliminating excessive queries and object creations
- Implemented customer portfolio filter using Python to write dynamic Elasticsearch queries

MIT Lincoln Laboratory

Software Engineer, Co-op

Jan 2019 - Sept 2019

- Developed Matlab library to manually trace axons on 3D brain volumes and provide neural network training data
- Automated data processing using **bash** and **Matlab** scripts on MIT's supercomputing cloud
- Increased data pipeline capacity by **6,300%** by modifying Matlab's volume processing functions
- Prototyped autonomous drone rescue system by integrating various neural networks as featured in **2020 IEEE Aerospace Conference: Toward an Autonomous Aerial Survey and Planning System for Humanitarian Aid and Disaster Response**
- Wrote program to compute shortest paths from aerial images using Dijkstra's algorithm and MIT's RoadTracer model

Northeastern University

Teaching Assistant for "Discrete Structures"

Sept 2018 - Jan 2019

- Held office hours to cover graph theory, inductive proofs, binary and modular arithmetic, counting, and probability
- Graded ~25 assignments weekly and attended faculty meetings to discuss student feedback and course adjustments

PROJECTS

- **NeuDorms** (2020) - Built website for students to search, filter, review dorms using **React**, **Spring**, **JPA**, and **MySQL**
- **AirVisuals** (YaleHack2019 "Best Website") - Developed web app to store, search, and visualize 10,000+ airline reviews across 6 relational tables using **React**, **Flask**, and **MySQL**
- **CounterPoint** (HackMIT2019 "Best Use of Google Cloud") - Created website to analyze political article's sentiment and suggest opposing viewpoints using **Flask** and **Google's NLP** and **Search APIs**

ACTIVITIES

Leadership Managing Director at Develop For Good

Hobbies Violin, Swimming, Snowboarding, Mountain biking, Tennis, Origami, Ice skating, Cooking