Aryton Hoi

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Education

Northeastern University | Boston, MA   **Sept 2017 - Expected May 2021**
Khoury College of Computer Sciences   GPA 3.74 / 4.00
Bachelor of Science in Computer Science • Minor in Mathematics

Courses	Web Development, Algorithms, Object-Oriented Design, Networks, Computer Systems, Embedded Systems, Statistics, Multivariable Calculus, Differential Equations and Linear Algebra
Awards	Google CodeJam2018 Qualifier, University Honors Program and Scholarship, Dean's List

Skills

Languages	Python, Java, C/C++, Matlab, SQL, HTML/CSS, JavaScript, Racket
Technologies	Linux, Windows, Git, Keras, Tensorflow, Anaconda, React, Slurm, ROS, Tmux + Vim, JetBrains

Projects

Sorting Visualizer   **Feb 2020 - Ongoing**
HTML/CSS, JavaScript   Personal
- Building web app that interactively visualizes various sorting algorithms and their time/space complexities using HTML, CSS, and JavaScript
- Planning to implement MVC approach to practice better code design

arytonhoi.github.io   **Jan 2020 - Ongoing**
HTML/CSS, Bootstrap, Figma   Personal
- Building website to showcase personal projects and experiences and host personal web apps using HTML, CSS, and Bootstrap
- Designing future iterations using Figma

AirVisuals | Awarded "Best Website"   **Oct 2019 - Dec 2019**
React, Flask, HTML/CSS, SQL, JavaScript, Python, Google Cloud   YHack2019 / Personal
- Built customer review analytics web app using React front-end and Flask REST API to dynamically execute SQL queries and Google API calls
- Designed and implemented SQL relational database to store and query 10,000+ data entries
- Automated categorization of customer reviews based on keywords and sentiment using Google Cloud's NLP API

CounterPoint | Awarded "Best Use of Google Cloud"   **Sept 2019**
Flask, Python, HTML/CSS, Google Cloud   HackMIT2019
- Built web app that extracts keywords and analyzes sentiment of online political articles to suggest related articles from opposing or neutral sources to combat media bias using Flask and Google Cloud's NLP API

Experience

MIT Lincoln Laboratory | Summer Intern   **July - Sept 2019**
Python, Keras, Bash, Slurm, Anaconda   Lexington, MA
- Co-developed autonomous aerial drone system that locates, assesses health, and triages civilians to aid first responders
- Integrated RoadTracer model to extract road network graphs from satellite images and implemented Dijkstra's algorithm to compute shortest paths
- Processed 70GB+ (zipped) drone dataset and trained YoloV3 to detect pedestrians from video in real-time from birds-eye view with 70% mAP
- Utilized OpenPose to classify health status of persons from video in real-time based on body gestures

MIT Lincoln Laboratory | Biomedical Image Processing Co-op   **Jan - Sept 2019**
Keras, Tensorflow, Anaconda, Python, Matlab, Bash, Slurm, LL Supercomputing Cluster   Lexington, MA
- Fully automated 3D axon fiber tracing by implementing 3D-Unet with custom weighted cross-entropy loss function using Keras
- Established annotation procedure for interns which resulted in three 256x256x1000 fully-labeled axon subvolumes, enabling development of evaluation metrics and other machine learning models
- Streamlined data processing pipeline that handles 20GB+ (zipped) multi-channel brain volumes using Python and modified Matlab libraries

Activities

Involvement	Boston Youth Symphony, Toastmasters, Obstacle Race Course Training
Hobbies	Violin, Tennis, Origami, Ice Skating, Cooking, Dancing