Aryton Hoi

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Education

Northeastern University | Boston, MA
Khoury College of Computer Sciences
Bachelor of Science in Computer Science • Minor in Mathematics

Sept 2017 - Expected May 2021
GPA 3.74 / 4.00

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

arytonhoi.github.io
HTML/CSS, Bootstrap, Figma

Jan 2020 - Ongoing
Personal

- Building website to showcase personal projects and experiences using HTML, CSS, and Bootstrap
- Designing future iterations using Figma

AirVisuals | Awarded "Best Website"
React, Flask, HTML/CSS, SQL, JavaScript, Python, Google Cloud

Oct 2019 - Dec 2019
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"
Flask, Python, HTML/CSS, Google Cloud

Sept 2019
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
Python, Keras, Bash, Slurm, Anaconda

July - Sept 2019
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
Keras, Tensorflow, Anaconda, Python, Matlab, Bash, Slurm, LL Supercomputing Cluster

Jan - Sept 2019
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

Robotics and Intelligent Vehicles Research Laboratory | Researcher
ROS, Python, Bash, Tensorflow, Google Cloud

Dec 2017 - Sept 2018
Boston, MA

- Developed program to translate complex colloquial speech into sequential robot commands using Google's NLP API
- Integrated various neural networks to classify gender, age, emotion, clothing, and pose of person from image

Activities

Involvement Boston Youth Symphony, Toastmasters, Obstacle Race Course Training

Hobbies Violin, Tennis, Origami, Ice Skating, Cooking, Dancing