NICHOLAS CHARCHUT

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EDUCATION

Massachusetts Institute of Technology (MIT)

Cambridge, MA

Intended Bachelor of Science in the Department of Electrical Engineering and Computer Science – 4.5/5.0 GPA

Class of 2019

Relevant Coursework – Inference and Information Theory, Machine Learning, Software Construction OS Engineering, Mathematical Programming, Machine Vision

Santa Monica High School

Santa Monica, CA

Valedictorian – 4.5/4.0 Weighted/Unweighted GPA, ACT: 34

Class of 2015

Relevant Coursework - Multivariable Calculus, Linear Algebra

EXPERIENCE

Capital One New York, NY

Data Engineer – Intern

Summer 2018

Collaborated with product management teams and developers company-wide to identify and solve a problem in order to better facilitate the integration and adoption of a real-time data pipeline.

Wrote intuitive interface for Angular developers, currently being approved to go into production.

IBM Cambridge, MA

Software Engineer, Computer Vision – Intern

Winter 2017-2018

Enriched dataset for automated sports commentary ML model by tracking player location on and off screen. Developed technique for labelling of players in 3D space using identification, pattern matching, and homography.

Computer Science and Artificial Intelligence Lab

Cambridge, MA

Software Engineer, Autonomous Driving – Researcher

Summer 2017 – 2018

Constructed a pipeline to infer and draw driven paths given image and LIDAR data from the KITTI dataset. Architected a model capable of estimating epistemic and aleatoric uncertainty of a proposed path in real-time.

NASA Jet Propulsion Laboratory

Pasadena, CA

Software Engineer, Computer Vision – Intern

Summer 2017

Optimized image alignment process for virtual construction of the Martian landscape, using .NET framework. Implemented PCA-SIFT to make feature matching more robust against various distortions between images. Enacted Graph Transformation Matching (GTM) to enhance efficiency in filtering false-positive matches.

GrabCAD Somerville, MA

Software Engineer – Intern

Winter 2016 - 2017

Effected communication protocol with printer drivers to collect job images and create a stop-motion video. Created a computer vision model using various techniques (SURF, KAZE, BoF) to detect printer failures.

LEADERSHIP AND ACTIVITIES

Camp Kesem Cambridge, MA

Teen Counselor – Volunteer

Fall 2016 – Current

Serve as a mentor for children affected by their parent's cancer during a one week, sleep-away summer camp.

MIT Men's Varsity Baseball

Cambridge, MA

Pitcher Fall 2015 – Current

Provided mentorship to underclassmen on time management, work ethic, and general life skills.

Phi Beta Epsilon Fraternity

Cambridge, MA

Network Administrator

Spring 2016 - Current

Maintaining and updating the fraternity website, implementing new features to enhance user experience. Communicating with MIT administration to effectively resolve network issues.

SKILLS