nickcharchut.me ncha@mit.edu

Nicholas Charchut

(310) 702-6238

Education

**Massachusetts Institute of Technology** 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– Algorithms I, Discrete Mathematics, Computation Structures

*Spring:* Computer System Security and Engineering, Machine Learning, Software Construction

**Santa Monica High School** Santa Monica, CA

*Valedictorian – 4.5/4.0 Weighted/Unweighted GPA*, ACT: 34 – M: 35, E: 36, CR: 32, S: 32 *Class of 2015*

Relevant Coursework – Multivariable Calculus, Linear Algebra

Experience

**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.

Enacting 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.

**Nano Terra, Inc.** Cambridge, MA

*Software Engineer, R*&*D – Intern Summer 2016*

Developed graphical user interface for continuous live data collection from a network of integrated sensors.

Coordinated with electrical engineers to design new sensor circuitry and construct new prototype iterations.

Designed a cohesive data structure to efficiently categorize and perform live analysis for statistical purposes.

**Computer Science and Artificial Intelligence Lab** Cambridge, MA

*Project Arco – Researcher Winter 2015 – Spring 2016*

Built a web crawler to obtain biological models with their respective metadeta for analysis.

Implemented a cross-compiler to convert octave files to a unique dynamic problem solving language.

Leadership and Activities

**Camp Kesem** Cambridge, MA

*Teen Counselor – Volunteer Fall 2016 – Current*

Planned engaging lessons, demonstrations, and experiments that promoted scientific understanding.

Inspired and motivated elementary students to pursue careers in STEM fields.

**MIT Men’s Varsity Baseball** Cambridge, MA

*Pitcher Fall 2015 – Current*

Contributed to the team’s winning effort in the regular season NEWMAC title in the Spring of 2016.

Providing 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

Python • Java • C/ C++/C# • HTML/CSS • .NET Framework • CAD Modeling (AutoCAD)

Poetry • Hiking • Binge-watching critically acclaimed television shows