nickcharchut.me

NICHOLAS CHARCHUT

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(310) 702-6238

EDUCATION

Massachusetts Institute of Technology Cambridge, MA
Intended Bachelor of Science in the Department of Electrical Engineering and Computer Science – 4.6/5.0 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.
Analyzed differential equation theory in order to more efficiently execute system equation solver.

LEADERSHIP AND ACTIVITIES

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.

Vacation Bible School Santa Monica, CA
Physical Science Teacher – Volunteer *Summer 2011 – Summer 2015*
Planned engaging lessons, demonstrations, and experiments that promoted scientific understanding.
Inspired and motivated elementary students to pursue careers in STEM fields.

SKILLS

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

Poetry • Hiking • Binge-watching critically acclaimed television shows