

Alexander Barcenas

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Education

B.S., Computer Science, UC San Diego

Graduation Date: June 2018

GPA: 3.76

Skills

Computer Languages: C++ (Proficient), Swift (Proficient), Java, C, S.P.A.R.C. Assembly

Tools: Git, Vim, Xcode, GDB

Experience

CubeSat - Avionics Software Engineer - 15+ hrs a week

(10/2015 - present)

- Developing software in C++ that will operate a cube satellite for NASA's CubeQuest Challenge.
- Writing software that will handle all of the data that is collected by the cube satellite.
- Researched and learned from academic papers about software utilized by other cube satellites.
- Designed the structure of the software that will be used onboard the cube satellite.
- Created a UML class diagram in order to create a visualization of the software's structure.
- Wrote and revised documentation included in a 1059 page document about the cube satellite.

Stanford Swift course

(6/2015 - 9/2015)

- Learned the basics of the Swift language and how to use Xcode to construct iOS applications.
- Developed a stack based graphing calculator for iOS devices using concepts from the course.

Relevant Coursework (Planned completion by Summer 2016)

Completed:

- Advanced Data Structures (CSE 100)
- Introduction to Data Science (COGS 9)
- Math for Algorithms and Systems (CSE 21)
- Computer Organization and Systems Programming (CSE 30)

Ongoing:

- Design and Analysis of Algorithms (CSE 101)
- Components & Design for Digital Systems (CSE 140)

Planned:

- Theory of Computability (CSE 105)
- Software Engineering (CSE 110)

Extracurriculars

Students for the Exploration and Development of Space (SEDS), UCSD

(10/2015 - present)

- SEDS is a national student organization that undertakes space related projects.
- I was accepted into SEDS so that I could work on the software for their cube satellite project.