

## OBJECTIVE

Incoming Sophomore at Caltech with 3.87 GPA, majoring in **Computer Science** and **Applied Computational Mathematics**. Completion of computer science minor in freshman year alone, looking to demonstrate capability and skill in computer science or applied math. Check out my website for projects, research paper, or more details about me !

## EXPERIENCE

### Undergraduate Researcher - Caltech - Powell Booth Computational Lab - July 2016 - September 2016

- Aerospace Research Fellow, worked with deep neural networks, convolutional neural networks, and other machine learning systems to classify large data sets in the fields of neuroscience (fMRI images) and astronomy (synoptic curves).

### Software Programmer - BIS Computer Solutions - May 2015 - September 2015

- Gained exposure and competency dealing with app development, website development, working with databases, etc. References : Michael Macho (Division President BIS Computer Solutions, Glendale CA 91214) – 818-248-5023 Ext 101.

### Software Programmer — Keybloc - December 2015 - February 2015

- Helped design an app for a small company looking to produce a social media app.

## PROJECTS

- **Convolutional Neural Network For Video Classification** - Pattern recognition in fMRI video clips. Conducted research on optimization of convolutional neural networks on datasets with high dimensionality.
- **Othello A.I.** - An A.I that plays Reversi competitively. (Working on improving existing Chess and Go A.I.'s)
- **Garbage Collector, Memory Allocator** - Designed a custom garbage collector and memory allocator in C++.
- **Credit Card Information Capture** - Optimized module to capture credit card information using native camera capabilities on a smartphone.
- **Caring Professionals Inc Website** - On team that made day - to - day operational website for Caring Professionals Inc. Helped create architecture connecting their back office to Android and iOS systems.
- **Classic Party Rentals Back Office App** - On team that developed an iOS and Android app to assist the sales representatives of Classic Party Rentals, a multimillion dollar company.

## EDUCATION

### Crescenta Valley High School

- Graduated 2015, 4.60 GPA

### California Institute Of Technology - 3.87 GPA

- Ma 1a-c (*Introduction to Analysis*), Ma 6a (*Discrete Math*), CS 1 (*Python*), CS 2 (*C++*), CS 11 (*C*), CS 21 (*Decidability and Tractability*), CS 38 (*Algorithms*), CS 24 (*Introduction to Computing Systems/OS*). Taking CS 143 (*Networking*), CS 156 (*Learning Systems*), and Ma 108a (*Classical Analysis With Topology*)

## ACCOMPLISHMENT / SKILLS

- Comfortable with implementation and use of data structures (Stacks, Queues, B-Trees, Red-Black / 2-3-4 Trees, Hash Tables, Heaps, Graphs, Tries, etc.) and extremely well versed with algorithms.
- Worked extensively with neural networks involving audio, video, text, and other high dimensional data.
- **Excellent In:** C, C++, Python, IA32 Assembly **Versed In:** Java, Javascript, CSS, HTML, PL/SQL, MySQL
- IDE's/Tools/Libraries: Eclipse, Android Studio, Titanium, Oracle Apex, Tensor Flow
- ACSL Computer Science Competition Winner; Qualified For National Competition, Aime Qualifier (2014, 2015)
- Westmont Math Competition: Research Competition (2nd Place): *Using Higher Order Differential Equation Systems And Source - Sink Dynamics To Assess Bridge Stability*