

# Andrew M. Zhang

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## Education

**2016-Present** College – UC Berkeley, Computer Science  
GPA: 3.925  
Currently Taking: CS189 - Intro to ML, Stats 134 - Probability, Math 110 - Linear Algebra  
CS170 Algorithms,  
Classes Taken: CS61a - SICP, CS61b - data structures, CS61c - Computer Architecture  
CS70 - Discrete Math and Probability, Math 55 - Discrete Math, Math 53 - Multivar Calc  
Math 54 - Linear Algebra, EE16A - Designing Information Systems, EE16B - Designing  
Information Systems II

## Recent Awards and Positions Held

- **Lead Android and Full-Stack Developer for Geeni (July 2016 - Current)**
  - Working for a student-run startup at UC Berkeley, 'Geeni'.
  - Integrated Firebase Realtime Database, Cloud Messaging, File Storage, and Google Sign In
  - Current finalist in Berkeley Big Ideas Funding Competition
- **Competitions**
  - USA Computing Olympiad Gold Division (2016)
  - Google FooBar: Finished Level 5/5 Challenge 1/2 (In Progress)
  - EasyCTF 2015 Computer Security Competition 44th Nationwide (3rd Percentile)
  - FTC Robotics Team Captain (Team 6688, 2016) - Placed regionals twice, among other awards
  - Stanford Programming Contest 2014, 2015, 2016: Honorable Mentions
- **Personal C++/Java Projects - Available on Website**
  - Raytracer with diffuse shading, working on Phong spectrals (2017, Work In Progress)
  - Hog optimal solve with expectimax tree for CS61A FA15 (2016)
  - Boid (bird) flocking animation w/ Kd-trees and k-nearest neighbor search. (2016)
  - Tic-tac-toe perfect AI player with minimax trees (2015)
  - Collision system animation implemented with priority queues (2015)
- **Research: Eclipsing Binary Star Light Curve Generator, COSMOS, UC Santa Cruz, 2014**
  - Under Prof. Guhathakurta, developed an algorithm that plots light curves of eclipsing binary stars.
  - Took into account the limb darkening effect, unlike most light curve simulations.
  - Code at: [github.com/andrewmzhang/COSMOS-2014-Binary-Eclipse](https://github.com/andrewmzhang/COSMOS-2014-Binary-Eclipse)
- **Class Related Projects**
  - Bearmaps, a map of Berkeley implemented with Quad-trees and the A\* shortest path algorithm
  - Scheme Interpreter, written in python 3
  - 16-bit MIPS CPU, implemented with Logisim, complete with pipeline, forwarding, and bubble support

## Software Engineering Skills

- **Programming Languages and Databases**
  - Python 2, 3, C, C++, C#, Java – Android*
  - HTML, CSS, JavaScript/jQuery – Meteor, AJAX, Nodejs, Bottle Frameworks*
  - Firebase - Realtime Database, Logins, Cloud Messaging, and Storage*
  - git - version control system*
  - Linux Bash - basic scripting*
  - MongoDB, SQL databases*
- **Additional Computer Science Courses**
  - Algorithmic Theory – Algorithms by Robert Sedgewick, online Princeton course*