

# Cameron Hudson

 CameronHudson8@gmail.com  484-888-0588  Mountain View, CA  
 CameronHudson.info  linkedin.com/in/CameronHudson8  github.com/CameronHudson8

## Summary

Software Engineering master's student seeking Summer 2019 internship. Passionate about software-driven problem solving. Broad interest and experience spanning full-stack web applications down to microcontrollers.

## Education

**MS, Software Engineering, 3.45 GPA** Mountain View, CA  
Carnegie Mellon University, Silicon Valley Aug 2018 - Dec 2019

- Foundations of Software Engineering: Best practices of team collaboration and development.
- Foundations of Computer Systems: Low-level software; optimizing for specific architectures.

**Algorithms and Data Structures** Coursera  
Stanford University Jan 2018 - Mar 2018

- Divide and Conquer, Sorting and Searching, and Randomized Algorithms.
- Graph Search, Shortest Paths, and Data Structures.

**BS, Chemical & Biomolecular Engineering, 3.39 GPA** Baltimore, MD  
Johns Hopkins University Sep 2008 - May 2012

- Linear Algebra: Matrix algebra. Linear regression, eigenvectors and eigenvalues, orthogonality.
- Differential Equations: Laplace transforms, exact solutions to first- and second-order equations.
- Calculus 3: Multivariate calculus. Gradients, integrals, optimization subject to constraints.

## Academic Projects

- Emergency Social Network: Collaborated on mobile-friendly web app for use during disasters. Full MEAN stack (MongoDB, ExpressJS, Angular 7, NodeJS). RESTful HTTP API. WebSockets for realtime updates. JSON Web Tokens for authentication. Mocha for test-driven development (TDD).
- Architecture Lab: Optimized C programs by identifying cycles wasted with Gem5 simulator. Interpreted the offending assembly code and refactored the original C code for efficiency.
- Malloc Lab: Developed C package for memory allocation similar to malloc in utilization and speed.

## Personal Projects

- Day Trading Web App for Eve Online: Authenticates with game server using OAuth. Performs asynchronous HTTP requests and calculations. Persists results to MySQL Database. Laravel back end, Angular 4 front end.
- Bayesian Trading Add-On for Elder Scrolls Online: Written in Lua. Collects incomplete game market data and uses a maximum a posteriori (MAP) profit estimate of identify the most lucrative items to trade.

## Skills and Interests

Languages	Frameworks	Databases	Other Interests
C, JavaScript, Java	Angular 7, Laravel	MySQL, MongoDB	SciFi, Hiking, Board Games

## Professional Experience

**Process Engineer 2** Princeton, NJ  
Axens (Petroleum Desulfurization) Jul 2016 - May 2017

- Automated calculations critical to the design using Visual Basic, thereby increasing safety, reducing error potential, and decreasing man-hour costs for all future projects.

**Process Engineer 2** Hampton Township, NJ  
Amec Foster Wheeler (Engineering Contractor) Jan 2013 - Mar 2016

- Leveraged Visual Basic to assemble and format the largest Heat and Material Balance in the office's history.

## Certifications

- Nov 2017: National Council of Examiners for Engineering and Surveying, Engineer-In-Training
- Oct 2017: American Society for Quality, Six Sigma Green Belt