# Matthew E. Olson

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## Education

### Duke University
*Durham, NC*

Electrical and Computer Engineering (B.S.E.), Physics (B.A.), and Computer Science (Minor) *2013-2017*

- Cumulative GPA: 3.8
- Relevant Coursework: Data Structures, Algorithms, OS, Embedded Systems, Computer Architecture, Quantum, Circuits
- Independent Coursework: Berkeley Artificial Intelligence, Caltech Machine Learning
- Academic Chair of Pi Kappa Phi Fraternity. Member of Club Soccer Team. HackDuke participant

### Kent Denver School
*Englewood, CO*

Cum Laude Scholar, Class of 2013 Math and Science Award *2009-2013*

- Cumulative GPA: 4.3
- Editor-in-Chief of newspaper. Authored 18 articles. Managed 40 members. CHSPC Award.

## Experience

### Chesapeake Technology International
*Denver, CO*

Software Engineering Intern *Summer 2015 - Summer 2016*

- Worked on RaptorX, a real-time visualization and control software for military operations
- Completed spectrum visualizer and analyzer used by 3 current projects
- Derived algorithm for cell tower usage and created elements to visualize electromagnetic spectrum

### Echostar Corporation
*Englewood, CO*

Engineering Intern in Failure Analysis Department *Summer 2014*

- Tested and improved the functionality of automated testing devices for digital video recorders
- Found and replaced faulty components on digital video recorders using circuit schematic and multimeter

### Secure64 Software Corporation
*Greenwood Village, CO*

Software Engineering Intern *Summer 2013*

- Worked on Gr8Privacy, a file sharing encryption software. Presented demos and helped raise $1.15 million in funding
- Designed and set up web page using WordPress. Found bugs and improvements in Gr8Privacy software

### Independent Physics Laboratory
*Durham, NC*

Memristor and Tunnel Diode Research *2015 - Present*

- Derived switching characteristics of stochastic electronic transport and designed switching circuit with tunnel diode
- Tested noise induced switching on memory devices, homemade memristors, and neuronal transport

### Duke University Engineering Department
*Durham, NC*

Teacher's Assistant *2014-2016*

- Led lab, managed recitation, held office hours, and graded assignments for ECE 350, CS 250, and EGR 103

## Technical Skills

- Java, C, Python, Swift, Objective-C, Golang, Verilog, MIPS, Matlab, Labview, HTML, CSS, Arduino, iOS, Android, Linux
- Git, Heroku (Go, Djengo, Flask), Databases (PostgreSQL, MongoDB), Video Editing, Graphic Design (Illustrator, Photoshop)

## Side Projects

- Created Dare Devil: A platform for dares. Facebook integration for friends and Stripe integration for crowdfunding.
- Relased Spider! to the Mac App Store: Simple spider solitaire game for the Mac. Built in 5 days.
- SMSNews: Current events texting service using Plivo SMS, Heroku cloud, and Wikipedia current events
- Chess Artificial Intelligence: Python scripts using minimax algorithm and alpha beta algorithm to play chess
- Pipelined Processor: Built in Verilog HDL for FPGA with multiplier/divider, ALU, and register file

## Personal

- Hobbies include side projects, philosophy, travel, rock climbing, fantasy football, soccer, basketball, tennis, and Ping-Pong
- Duke Basketball fan (tented for 4 weeks), Rubik's cube solver (90 seconds), Juggler, Half-Marathon Finisher (1:31)