

William H. Ernst

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EDUCATION

MIDDLEBURY COLLEGE

Middlebury, VT

- **Bachelor of Arts candidate**, Computer Science and Economics double major, May 2017
- **Major GPA**: 3.97 (Economics); 3.92 (Computer Science)
- **Overall GPA**: 3.74; College Scholar (highest academic honor) Fall 2014, Spring 2015, Fall 2015, Fall 2016; Dean's List Spring 2014;
- **Relevant Coursework**: Data Structures, Algorithms & Complexity, Computer Architecture, Computer Networks, Systems Security, Data Visualization, Theory of Computation, Artificial Intelligence; Calculus II, Linear Algebra, Statistical Learning, Regression Analysis, Applied Econometrics, Game Theory;
- **Athletics**: Captain of Middlebury Lacrosse team, 2x NESCAC All-Academic Team, 25 hours/week
- **Activities**: Computer Science Department Grader, Student Investment Club, CS Club ("Middle Endian")
- **Programming**: Python, Java, C, JavaScript (Node.js, AngularJS, D3); R, STATA, Excel; Experience in Linux

STANFORD UNIVERSITY, Summer 2015

Stanford, CA

- Coursework: Client-side Internet Technologies, Introduction to Computer Graphics and Imaging
- Created Web 2.0 interfaces in JavaScript using AJAX, Node.js and AngularJS
- Generated visual imagery in both 2D and 3D using OpenGL API with C++

SELECTED PROJECTS

- Programmed an AI agent that learns how to play the game 'Othello' through reinforcement learning using the TD-Lambda algorithm and a neural network in Python, self taught
- Developing MOHO, a website for local rental housing listings in Middlebury (MEAN Stack app)
- Built a handwritten digit recognizer using a neural network with supervised learning
- Implemented a network protocol parser and builder in C, capable of sending and receiving live ARP, ICMP, IP, UDP, and DNS packets
- Created a market visualization in D3 capable of pulling live stock data from Yahoo Finance

EXPERIENCE

MOHO (www.middoffcampus.com), January 2016-Present

Middlebury, VT

Co-Founder, Lead Developer

- Developed the server, database, and front-end for the website using the MEAN Stack
- Monitor website data and traffic through Google Analytics
- Participated in the design of an associated financial model for the service
- Conduct market research in order to best tailor the service to our customers

SECURITY FIRST CORP, June 2016-Present

Rancho Santa Margarita, CA

Software Intern

- Designed and built the entire suite of over 75 automated UI tests for the company's Policy Management Engine using the Selenium API in Python and the page objects design model
- Participated in daily scrums and management discussions on test coverage
- Continuing work with SFC during the school year

MIDDCORE, June 2014

Lake Tahoe, CA

- Collaborated with other participants and executives from 50 Eggs Films and the Tahoe Food Hub to solve challenges their businesses were facing; Raised \$2,500 for one of the companies
- Identified and developed a new business venture and associated financial model in MiddCORE's Innovation Challenge
- Completed 160+ hours of mentor-driven workshops designed to develop entrepreneurial, leadership, collaboration, strategic thinking, persuasive communication, and financial literacy skills

PERSONAL

- **Interests**: Surfing, Skiing, Hiking, Biking, Guitar
- **University High School, S.F.**: Athlete of the Year, Lacrosse Captain, High School All-American, Student Council.