

# 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 (2017), 3x NESCAC All-Academic Selection, 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

## 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
- Developing MOHO ([www.middoffcampus.com](http://www.middoffcampus.com)), a website for local rental housing listings in Middlebury using the MEAN Stack – MongoDB, Express, AngularJS, and Node.js
- 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
- **GitHub**: <https://github.com/wernst>; **Personal website**: <https://wernst.github.io/index.html>

## EXPERIENCE

### MOHO LLC ([www.middoffcampus.com](http://www.middoffcampus.com)), January 2017-Present

Middlebury, VT

#### Co-Founder, Lead Developer

- Developed the server, database, and front-end for the website using the MEAN Stack
- Set up the website's payment system with the Stripe API
- Participated in the design of the service's business model
- Conducted 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.