

# William H. Ernst

San Francisco, CA • [wernst@middlebury.edu](mailto:wernst@middlebury.edu)

**GitHub:** <https://github.com/wernst> • **Personal website:** <https://wernst.github.io>

---

## EDUCATION

**MIDDLEBURY COLLEGE**, 2013-2017

Middlebury, VT

- **Bachelor of Arts**, Computer Science and Economics double major, Magna Cum Laude
- **Major GPA:** 3.97 (Economics); 3.92 (Computer Science, with Honors)
- **Overall GPA:** 3.75; 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
- Designed a stock portfolio visualization using live stock data from Yahoo! Finance with D3

## 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.