

# Vy Ai Ly

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## EDUCATION

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### University of California, Berkeley

Bachelors in Computer Science and Cognitive Science | May 2017

Upsilon Pi Epsilon (UPE) Member - Computer Science Honors Society

#### Coursework

##### Computer Science:

**Completed:** Computer Programs(CS61A), Data Structures(CS61B), Machine Structures(CS61C), Linear Algebra and Differential Equations(Math54), Discrete Mathematics and Probability Theory(CS70), Artificial Intelligence(CS188), Algorithms(CS170), Ruby on Rails

**In progress:** Databases(CS186), Networks(CS168), User Interface Design(CS160)

##### Cognitive Science:

Social Psychology, Issues in Cognition, Neuropsychology, Stigma and Prejudice, Computational Modeling of Cognition(CogSci131)

## EXPERIENCE

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### Mann Consulting, Software Engineer Intern(Web/Databases) | Jun 2015 - Aug 2015

A small tech consulting firm that provides IT support to clients, such as home offices or small businesses

- Integrated resource scheduling in the company's custom CRM solution with Google Calendar
- Created an internal administrative client appointment scheduling tool that parses a user's command to offer recommended time slots
- Conducted user research to design and create a web page in PHP to simplify employees' data entry with auto-filled fields by retrieving and filtering data from the FileMaker database and Zendesk API.

### UC Berkeley Athletic Center, Web Developer | Nov 2014 - Jun 2015

- Provided real-time data for coaches on their athletes' academic progress with PHP, Bootstrap, and FileMaker.
- Cleaned up pre-existing code stylistically by replacing inefficient logic, shortening the code by 30%.

### UC Berkeley GAAMAC, Website Manager | Dec 2014 - Jun 2015

- Created, added, and curated content for the GAAMAC(Global Action Against Mass Atrocities) website with Professor Tetsushi Ogata.

### UC Berkeley Research, Global Warming Research Apprentice for Professor Michael Ranney | Jan 2014 - Jun 2015

- Provided feedback on new studies, materials, and theories.
- Designed and administered surveys through Qualtrics to investigate how people's understanding of global warming mechanisms affect their belief of global warming.
- Invited RCME (Research in Cognition and Mathematics Education) Colloquium Series talk, University of California, Berkeley. Ranney, M. A., Arnold, O., Fujinomaki, R., Ly V., Yan, E. X., Payne, A., Tran, A., Gan, L. W., & Chang, C. (2014, October). Can Conceptual Change Be Simple, Even If It's Not Easy? Experimental and Survey Evidence Plus [www.HowGlobalWarmingWorks.org](http://www.HowGlobalWarmingWorks.org).

### UC Berkeley Data Lab, Data Lab Assistant | July 2014 - Present

- Assisted patrons with Python and NumPy data analysis questions.

## SKILLS

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Python, Java, C, PHP, Ruby on Rails, CSS, HTML, Android

## ACADEMIC PROJECTS

- **Pacman(Python)** - Implemented AI through A\* search, value iteration, and Q-learning.
- **NP-Complete Traveling Salesman Solver(Python)** - Finds shortest route between cities with the added restriction of not being able to visit 3 cities of the same color (red or blue) using a mix of simulated annealing, nearest-neighbors, and Held-Karp algorithm.
- **Autonomous Strategic Player for Network Game(Java)** - Game playing AI agent with alpha-beta pruning
- **MapReduce(Apache Spark)** - AWS EC2 distributed parallelized BFS for large data

## SIDE PROJECTS

- **Beautiful Calcium(Javascript, CSS, and HTML)** - Interactive, fun site that explains the American Bone Health Association's Rule of 300. Design for Good Hackathon Best Design.
- **Jukebox(Django)** - Users can add and upvote songs on a website to control a master Spotify playlist.

## HOBBIES

- Settlers of Catan enthusiast; "House of Cards" fan; Enjoys recreational basketball.
- Member of Society of Women Engineers(SWE).