

# Alexander H. Patel

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## EDUCATION

Bachelor of Arts, Philosophy and Mathematics, expected May 2018 (on leave 2015-2016)  
Harvard College, Cambridge, MA  
Minor: Computer Science  
GPA: 3.56/4.0 (Philosophy: 3.85/4.0 (4 courses), Mathematics: 3.85/4.0 (4 courses))  
Relevant coursework: Operating Systems, Data Structures and Algorithms, Artificial Intelligence, Statistical Software, Discrete Mathematics, Linear Algebra, Real Analysis, Logic, Modal Logic.  
GRE M:165 V:164  
SAT I: M:720 V:720 R:790 (SAT II: Math II:800 Physics:800)

## COMPUTER SKILLS

*Languages:* Fluent: Python, C, R, SQL, Beginner: Javascript, Java  
*Tools:* Unix Shell, Git, JIRA, Amazon AWS, NumPy/Pandas, Twisted networking framework, MySQL, Redis, Nginx, HTML/CSS, Latex.  
*Skills:* asynchronous network programming, MySQL database administration, data ETL processes, Agile (Scrum) development, optimization and learning algorithms.

## WORK EXPERIENCE

*Quantitative Software Engineer* *September 2015 - September 2016*  
EverQuote (formerly Adharmonics), Cambridge, MA

- Acted as technical lead for development of real-time bidding (RTB) bidder platform. Designed and implemented high-volume, low-latency (<100ms) networking server in Python. Planned and organized project work for team of four engineers. Coordinated technical platform integration with real-time auction exchanges.
- Implemented machine learning (esp. multi-armed bandit) algorithms for e-mail and banner display content optimization.
- Earned 2nd place in company hackathon with real-time site arrivals geographic visualization.

*Software Engineering Intern* *Summer 2015*  
Adharmonics, Cambridge, MA

- Built third-party ad server for Google AdWords display advertising network.

*Student Campaigns Organizer* *May 2014 - May 2015*  
Free Software Foundation, Boston, MA

- Coordinated developer action on Javascript licensing and Digital Rights Management campaigns. Authored technical issue posts topical to the free software community.

## TEACHING

*Course Assistant* *Spring 2016 - Present*  
Harvard Mathematics Department

- Teaching staff member for Math E-23a: Linear Algebra and Real Analysis I (Fall 2016) and Math 156: Mathematical Foundations of Statistical Software (Spring 2016).
- Hosted weekly section and office hours; graded student R homework assignments and proof presentations.

*Teaching Fellow* *2015-2016*  
Harvard Computer Science Department

- Teaching staff member for CS161: Operating Systems (Spring 2016) and CS61: Systems Programming (Fall 2015).
- Administered weekly section and office hours. Graded and assisted with student C programming assignments, design documents, and toy kernel implementations.

## EXTRA-CURRICULAR ACTIVITIES

The Harvard Crimson, programmer for website Python back-end and news reporter on Harvard Business School beat  
Boston Museum of Science Computer Clubhouse, volunteer student mentor