

# Lewis J. Ellis

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## Work Experience

**Software Engineering Intern, Shape Security, KPCB Engineering Fellowship, May - August 2014**

**Software Engineering Intern, App.net, May - August 2013**

- Restructured test suite to reduce build times by 15%
- Developed a relevancy metric for place objects and used it to improve the quality of place search results
- Migrated user search indexing from Solr to ElasticSearch
- Designed and implemented extensive improvements to annotations on API objects, making it easier for third party apps to represent relationships between posts, users, places, files, and media.

**Student Developer, PennApps Labs, September 2012 - December 2013**

- Build and maintain web services used by Penn's student body with Flask and Django
- Interview candidates and mentor new hires, introducing them to Python, databases, and web frameworks

**Junior Counselor, Canada/USA Mathcamp, June - August 2012**

- Planned and executed the camp-wide hiking trip, talent show, and feedback surveys; managed camp finances and visitor accommodations; taught campers to speedcube; made lots of liquid nitrogen ice cream
- Served as an RA and role model for campers; did whatever was necessary to make camp run

**Teaching Assistant, University of Pennsylvania, January 2012 - Present**

- CIS 120, a 2nd-semester course on programming patterns and data representation with OCaml and Java, Spring 2012 - Fall 2013
- CIS 121, a 3rd-semester introduction to data structures and algorithms with Java, Spring 2014
- Teach a lab section, lead course-wide review sessions, hold office hours, grade projects and exams

## Education

**University of Pennsylvania, Fall 2011 - Present**

- Networked and Social Systems, a branch of CS focusing on applications of network theory. Expected BSE 2015. GPA 3.6.
- Coursework: Artificial Intelligence, Algorithms, Databases, Advanced Functional Programming, Crowdsourcing, Cloud Computing, Networked Systems, Theory of Networks, Network Security, Cryptography, Game Theory, Optimization Theory, Probability, Linear Algebra, Discrete/Combinatorial Math
- Organizer of **PennApps**, the largest college hackathon in the world, hosted at Penn each semester
- Lead organizer of **PClassic**, a semesterly high school programming contest which had 300 participants in Fall 2013
- Current club Ultimate player, former Penn Track & Field long jumper

## Projects

- **ABCrowd** (Fall 2013). Use Mechanical Turk to get quantitative feedback on a website. Users create questions and launch jobs to get feedback, ABCrowd runs them and compiles the results. Useful for sites without enough natural traffic to do effective A/B testing.
- **QuestionsForMe** (HackNY Spring 2013). Question queue for a speaking or panel event. Audience can upvote questions by donating to charity. Made in 20 hours with one teammate. Python/Flask, MongoDB, Venmo & Twilio APIs
- **Dropbox IDE** (2nd place HackRU Fall 2012). In-browser IDE which uses Dropbox as the user's workspace. Made in 21 hours with two teammates. Ruby/Sinatra, JavaScript, HTML/CSS
- **TWFarmer** (2009). Track gamestate/statistics, automate resource-farming in a web-based MMO game. PHP, MySQL, JavaScript
- **PSPNet, PSPTD** (2008). Text-based web browser, tower defense game, for PlayStation Portable. PSPTD was released to the homebrew community and downloaded over 1000 times. Lua

## Technologies

- Lua, JavaScript, Python, Haskell, OCaml, Java, MySQL, Redis, MongoDB, ElasticSearch
- Sublime, Node, Flask, git, AWS, MTurk, MapReduce
- Familiar with C++, Ruby, Common LISP, HTML/CSS