

# Lewis J. Ellis

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## Work Experience

- **Shape Security** **Mountain View, CA**  
*May – August 2014*  
*Software Engineering Intern, KPCB Engineering Fellow*
    - Built a robust, high-volume event collector, later used to receive and channel data for analytics.
    - Used CasperJS to test and debug the core transformation engine & various attack countermeasures.
    - Built & documented the main attack launcher component of a new R&D verification platform, then supported other engineers and researchers using the platform to test attacks against Shape's technology.
  - **App.net** **San Francisco, CA**  
*May – August 2013*  
*Software Engineering Intern*
    - Restructured test suites to reduce build times by 15%
    - Migrated user search indexing from Solr to Elasticsearch, built a metric to improve place search results
    - 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.
  - **Canada/USA Mathcamp** **Tacoma, WA**  
*June – August 2012*  
*Junior Counselor*
    - Planned and executed the camp-wide hiking trip, talent show, and feedback surveys; managed camp finances and visitor accommodations; taught campers to speed cube; made lots of liquid nitrogen ice cream
  - **University of Pennsylvania** **Philadelphia, PA**  
*Spring 2012 – Present*  
*Teaching Assistant & Head Teaching Assistant*
    - CIS 120, Programming Languages & Techniques, with OCaml and Java, 4 semesters.
    - CIS 121, Data Structures & Algorithms, with proofs and Java, 1 semester.
    - [CIS 160](#), Mathematical Foundations of CS, current head TA. Lead 18 TAs, manage course website.
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## Education

- **University of Pennsylvania** **Philadelphia, PA**  
*Fall 2011 – Present*  
*School of Engineering and Applied Science, expected BSE May 2015. GPA: 3.6*
    - Networked and Social Systems, a branch of CS focusing on applications of network theory.
    - Coursework: Artificial Intelligence, Algorithms, Databases, Advanced Functional Programming, Crowdsourcing, Cloud Computing, Networked Systems, Theory of Networks, Network Security, Cryptography, Game Theory, Stochastic Systems, Optimization, Probability, Linear Algebra, Discrete Math
    - Former developer with [PennLabs](#), a student group dedicated to building technology for student use
    - Organizer of [PennApps](#), the premier college hackathon, hosted at Penn each semester
    - Lead organizer of [PClassic](#), a semesterly high school programming contest with 100s of participants
    - Current [Penn Ultimate](#) player, former [Penn Track & Field](#) long jumper
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## Projects

- [awesome-lua](#) (Summer 2014). High-quality compilation of the modern Lua ecosystem with 300+ GitHub stars.
  - [Cumulonimbus](#) (Finalist, Greylock Hackfest 2014). Seamlessly joins multiple cloud storage accounts into one.
  - ABCrowd (Fall 2013). Use MTurk to enable sites/projects without the requisite traffic for effective A/B testing to get quantitative feedback. Lets users build questionnaires, then launches them and compiles the results.
  - [Dropbox IDE](#) (2nd place, HackRU Fall 2012). In-browser IDE which uses Dropbox as the user's workspace.
  - PSPNet, PSPTD (2008). Text-based web browser, tower defense game, written in Lua for the PlayStation Portable. PSPTD was released to the home-brew community and downloaded over 1000 times.
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## Skills & Technologies

**Languages, etc:** Lua, JavaScript, Python, Haskell, OCaml, Java, SQL, Redis, MongoDB,  $\LaTeX$

**Tools, platforms, etc:** Sublime, git, Node, Flask, OpenResty, AWS, MTurk, MapReduce, Elasticsearch

**Familiar:** Go, C, C++, Ruby, Common LISP, HTML/CSS

**APIs:** Experience in API design; have used App.net, Dropbox, Venmo, Twilio, Google, Facebook, Twitter APIs

**Presenting:** [ESLint tech talk](#), [Node.js workshop series](#), 3 yrs teaching, 3-time MC of PennApps closing ceremony