Lewis J. Ellis

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Work Experience

- **Shape Security** — **Mountain View, CA**
  Software Engineering Intern, KPCB Engineering Fellow — *May – August 2014*
    – 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**
  Software Engineering Intern — *May – August 2013*
    – 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**
  Junior Counselor — *June – August 2012*
    – Planned & 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**
  Teaching Assistant & Head Teaching Assistant — *Spring 2012 – Present*
    – 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.

Education

- **University of Pennsylvania** — **Philadelphia, PA**
  School of Engineering and Applied Science, expected BSE May 2015. GPA: 3.6 — *Fall 2011 – Present*
    – 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 homebrew community and downloaded over 1000 times.

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