

# Zachary Wasserman

## about

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github.com/zwass

## tech

Python, Java,  
C, Haskell,  
Hadoop/HBase,  
SQL, Bash, Git, SVN

## education

May 2013

**University of Pennsylvania**

*B.S.E. in Computer Science*

- 3.94/4.0 Major GPA (19 classes) – 3.78/4.0 Overall GPA
- Awarded Dean's List 2009-2010, 2010-2011, 2011-2012 for strong GPA
- Relevant Coursework: *Algorithms, Data Structures, Operating Systems, Distributed Systems\**, *Security\**, *Databases, Advanced Programming\**, *Intro/Advanced Architecture, Discrete Math, Theory of Computation*  
\*graduate level class
- Leader of PennQuest pre-orientation backpacking program to help integrate incoming students into campus life (2010-2012)

## experience

Summer '12

**Opower**

*Software Engineer Intern*

- *KPCB Engineering Fellow* on the Data Services team
- Built Hadoop/HBase implementations of core data infrastructure for disaggregating heating/cooling from overall customer energy usage
- Increased efficiency of analysis by 100x with MapReduce implementation
- Explored performance of HBase queries to optimize analysis algorithms

2010-2012

**UPenn Distributed Systems Lab**

*P25 Security Project Researcher*

- Hacked on radio scanner custom firmware used to perform data collection
- Implemented prototype attack on the P25 protocol using software defined radio

Summer '11

**Hulu**

*Software Engineer Intern*

- Built an automation system for the company's virtual servers (à la Amazon EC2)
- Created a RESTful API as an abstraction layer between VM hypervisor and frontend clients in Python
- Cached VM usage metrics to improve response time by an order of magnitude
- Implemented a web-based frontend in Python and Mako

2011

**University of Pennsylvania**

*CIS240 Teaching Assistant*

- Taught introductory computer architecture and C programming concepts

2009-2010

**The Daily Pennsylvanian**

*Lead Online Developer*

- Optimized database to eliminate crashes (50,000+ daily pageviews)
- Designed a new menu bar and polished page templates for thedp.com in PHP
- Recruited and supervised a 6-person staff of engineers

2005-2007

**University of California, Berkeley**

*Gamescrafters Researcher*

- Coded logic for solving the board game "Toot and Otto" in C
- Created a GUI in Tcl/Tk to play against a perfect computer opponent

## projects

2012

**IpControl**

*github.com/zwass/lpControl*

- Interpret rotation of a vinyl record as a computer input device
- Manipulating the record controls Spotify, or dials a virtual rotary phone
- *Awarded Organizer's Choice* at PennApps Hackathon September 2012

2012

**Distribuchat**

*github.com/zwass/distribuchat*

- Distributed chat implemented in C with reliable, in-order transmission over UDP
- Fault tolerance through distributed leader election algorithm

2012

**Roadtrippin'**

*rdtripp.in*

- Help users plan road trips by solving the travelling salesman problem and routing through their Facebook friends
- *Won third place* at PennApps Hackathon January 2012

## research

Why (Special Agent) Johnny (Still) Can't Encrypt: A Security Analysis of the APCO Project 25 Two-Way Radio System – *Awarded Best Paper*

Sandy Clark, Travis Goodspeed, Perry Metzger, Zachary Wasserman, Kevin Xu, Matt Blaze

20th Usenix Security Symposium, 2011, San Francisco, California