Zachary Wasserman

about
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zwass.com
github.com/zwass

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

education

2009-2013   **University of Pennsylvania**   *B.S.E. (Summa Cum Laude) in Computer Science*
- 3.96/4.0 Computer Science GPA (25 classes) – 3.81/4.0 Overall GPA
- Awarded *Computer Science Academic Award* for "excelling in Computer Science coursework well beyond the requirement for the degree."
- *Dean's List* 2009-2010, 2010-2011, 2011-2012, 2012-2013 for strong GPA
- Selected Coursework: *Algorithms, Data Structures, Operating Systems, Security*, Distributed Systems*, Databases, Advanced Programming*, Intro/Advanced Architecture* *graduate level class
- Leader of PennQuest pre-orientation backpacking program to help integrate incoming students into campus life (2010-2012)

experience

2011-2013   **University of Pennsylvania**   *Python Lecturer, Teaching Assistant*
- Developed curriculum for, and taught 30 student Python programming class
- Teaching assistant for intro computer architecture and intro Haskell programming

Summer '12   **Opower (*KPCB Engineering Fellow*)**   *Software Engineer Intern*
- 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 (á la Amazon EC2)
- Created a RESTful API as an abstraction layer between VM hypervisor and frontend clients
- Cached VM usage metrics to improve response time by an order of magnitude
- Implemented a web-based frontend with Python and Mako templates

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   **lpControl**   *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 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