ZacharyWasserman

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)

about
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zwass.com
github.com/zwass

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

experience

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

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 **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 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