David Penn Zmick
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EDUCATION

B.S. in Computer Science, Minor in Mathematics	Graduation: May 2016
University of Illinois at Urbana-Champaign	GPA: 3.60

WORK EXPERIENCE

ExtremeBlue Technical Intern, IBM — SUMMER 2015
- Explore at–rest data encryption for Connections (social enterprise software)
- Avoid trading collaboration features (collab. document editing) for security
- Understand the data security needs of IBM's cloud customers
- Use **NodeJS** to develop an encrypting file service for the Connections cloud
- Notable Libraries: **Mocha**, **Q**

Course Assistant, CS 241: Systems Programming — AUGUST 2014 — APRIL 2015
- Taught **Linux** system concepts in discussion sections
- Helped students with **C** programming language in office hours

Software Development Intern, BP High Performance Computing Team — SUMMER 2014
- Demonstrated feasibility of **HDF5** for storage of seismic data
- Implemented a variety of **C MPI** programs to understand performance impacts of various data storage schemes
- Worked with large (terabyte) datasets on a **Linux** cluster

Systems Administration Intern, BP High Performance Computing Team — SUMMER 2013
- Performed systems administration tasks for 5500 node **Linux** cluster
- Evaluated software options for internal data warehousing solution
- Deployed **Logstash** + **elasticsearch** + **Kibana** system monitoring tool

Undergraduate Researcher, National Center for Supercomputing Applications — AUGUST 2012 — APRIL 2013
- Learned how different types of information move through the Twitter network
- Created data visulizations using **Python** and **R**
- Other Technology: **MongoDB**, **Ruby**

NOTABLE PROJECTS

ANT SIMULATION
- Simulated movement of ants on a 2D grid with **Erlang**
- Four week final project for CS 242.
- **Python** and **Matplotlib** used for data visualization

STUDY GROUPS
- Simulated the formation of student study groups using **Haskell**
- Used **Python** and **R** for some automation and data vis

SET GAME
- Implement generalized version of "set" card game in **OCaml**

MCPLANR
- First place hackathon project at VandyHacks
- Use destinations from Google Maps and Nashville's open data project to plan a day in the city
- Relevant Tech: **NodeJS**, **Angular**, Facebook's **Flow** for Javascript

For blog posts and source code see dpzmick.com/resume_links