

David Penn Zmick
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EDUCATION

B.S. in Computer Science, Minor in Mathematics
University of Illinois at Urbana-Champaign
Senior Thesis: Macros for straightforward parallelism in Clojure

Graduation: May 2016
GPA: 3.62

WORK EXPERIENCE

Software Developer — JUMP TRADING JANUARY 2016
– Develop trading systems in **C++**

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

Course Assistant — CS 241: SYSTEMS PROGRAMMING AUGUST 2014
MAY 2016
– Taught **Linux** system concepts in discussion sections
– Helped students with **C** programming language in office hours
– Created new parallelism, interprocess communication, and high-performance, event driven networking assignments.

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

Researcher — NATIONAL CENTER FOR SUPERCOMPUTING APPLICATIONS AUGUST 2012
APRIL 2013
– Explored how different types of information move through the Twitter network
– Created data visualizations 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

AGAR.IO BOT

- Implemented a bot which plays the online game Agar.io in **Haskell**

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