

ALLAN PENG

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EDUCATION

University of California, Berkeley – Fall 2012 – Fall 2016

B.A. Major: Applied Mathematics & Computer Science, UC Berkeley Regents & Chancellor's Scholarship

London School of Economics - Summer 2016

International Relations & Law

WORK EXPERIENCE

UC Berkeley RISELab / AMPLab – Berkeley, CA

Research Engineer: Spring 2017 – Winter 2017

- Ported Pywren, a distributed computing engine built on AWS Lambda, to gcloud & Azure
- Benchmarked performance on different infrastructures
- Designed & ran experiments to grok underlying architecture
- Created tutorial IPython notebook demonstrating Pywren for ETL and data analysis.

Facebook Internet.Org Scalability Team– Menlo Park, CA

Engineering Intern: Fall 2015

- Worked on i.org traffic monitor, a debugging tool for Android engineers on iorg team
- Spoofed network connections on various carrier infrastructures by injecting HTTP Headers in packets, to allow engineers to dog-food FB/Internet.org products (FBLite, FreeBasics, Native FB)

Linkedin Secure Infrastructure Team– Mountain View, CA

Engineering Intern: Summer 2015

- Worked on internal certificate auth. service and CLI for TLS certificate generation, validation, tracking

Democratic Education at Cal– Berkeley, CA

Principles Decal Instructor: Spring 2016 – Fall 2016

- Prepared & gave weekly lectures on artistic styles, camera operation, editing tools
- Led critique sessions, gave constructive feedback on student work

TECHNICAL SKILLS

- Python, C, Golang, Java, Bash, Javascript, LaTeX, learning C++ !, Super Smash Bros. Melee
- Git, Unix, numpy, Node.js Raspberry Pi, AWS (S3, Lambda, EC2), Google cloud, Azure

PROJECTS

Paxos Distributed Data-store (Golang)

- Sequentially consistent, partition-tolerant distributed data-store built on top of Paxos.

Voice-Controlled Autonomous Guitar (Raspberry Pi, Python)

(www.allan.expert/guitar)

- Programmed Raspberry Pi to respond to speech commands and play a guitar by actuating solenoids

Linux Firewall (Python)

- State-ful packet filter for Linux. Filters based on IP subnet, DNS domain, or geo-location
- Implemented DNS redirects, TCP resets, and logging HTTP transactions

Markov Chain Monte Carlo Without Tears (LaTeX)

- Lecture-quality intro notes on MCMC methods, from basic theory to advanced algorithms
- Survey of research in MCMC methods to find solutions to #P problems in sub-exponential time

RELEVANT COURSEWORK

- *Graduate Level:* Modern Algorithms, Computational Geometry, Distributed Systems (audit at MIT)
- *Undergrad:* Machine Learning, Embedded Systems, Operating Systems, AI, Machine Arch, Network Arch.
- Real Analysis, Lin. Algebra, Complex Analysis, Abstract Algebra, Probability Theory, Critical Practices