ALLAN PENG
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WORK EXPERIENCE
Mod9 Technologies

Software Engineer   *Spring 2018-Present*
- Lead development on core B2B product, a scalable Speech Recognition server.
  The server can process hundreds of concurrent real-time audio streams at state of the art accuracy.
- Manage product releases, interface with clients, and write public-facing documentation.
- Built parallelized speech recognizer that transcribes audio up to 400x faster than real time.
- Implemented new speaker diarization (segmentation) system, using clustering and HMM-GMM models.
  The new system improved diarization error rate from 15% to 4%.
- Trained HMM-DNN models to transcribe English and Spanish using Kaldi.
- Designed finite state transducer that recognizes all possible pronunciations of American phone numbers.

UC Berkeley RISELab / AMPLab

Research Engineer   *Spring 2017 – Winter 2017*
- Research on building distributed computing platform using AWS Lambda and S3.
- Migrated and benchmarked Pywren project on different cloud infrastructures: Google Cloud & Azure.

Facebook

Engineering Intern, Internet.Org Scalability Team   *Fall 2015*
- Worked on i.org traffic monitor, a debugging tool for Android engineers on Internet.org team.
- Developed functionality for engineers to test Facebook products (FB-Lite, Free Basics, Native) on
  various carrier infrastructures from different countries.

TECHNICAL SKILLS
Languages: Python, C, C++ (Boost), Go (Golang), Bash, Java
Technologies: Linux, Kaldi, LaTeX, Docker, AWS, Google Cloud, OpenFST

PROJECTS
Paxos-based Distributed Datastore (Golang)
- General purpose Paxos library, and sequentially consistent partition-tolerant distributed datastore

Voice-Controlled Autonomous Guitar (Raspberry Pi, Python)   *(www.allan.expert/guitar)*
- Embedded system built with an array of solenoids held over the frets and strings of an acoustic guitar
- Built speech recognition interface to start, stop and choose songs, using Google Cloud APIs.

Linux Firewall (Python)
- Stateful packet filter for Linux. Filters based on IP subnet, DNS, or geo-location
- Implemented DNS redirects, TCP resets, and logging HTTP transactions

EDUCATION
University of California, Berkeley
B.A. Double Major: Applied Mathematics & Computer Science, Regents & Chancellor's Scholarship
London School of Economics
International Relations & Law