

Fan Pu Zeng

SOFTWARE ENGINEER

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Summary

I have experience working on both infrastructure at scale at Asana as well as full-stack systems at Saleswhale. I can work in cross-functional teams, effectively investigate and resolve infrastructure problems by synthesizing logs and metrics from many sources, work autonomously on open-ended problems, and translate product requirements into technical features. I am interested to work on the backend and infrastructure. I love startups, learning new things, and I am a big fan and user of Arch Linux.

Education

Carnegie Mellon University

Pittsburgh, PA, USA

B.S. IN COMPUTER SCIENCE

Aug. 2018 - Expected May. 2022

- Courses: Cloud Computing (Graduate), Introduction to Computer Systems, Introduction to Computer Security, Great Theoretical Ideas in Computer Science, Parallel and Sequential Data Structures and Algorithms, Principles of Functional Programming, Principles of Imperative Computation
- Activities: Plaid Parliament of Pwning (Cybersecurity & CTF competitions)
- GPA: 4.0, Dean's List

Work Experience

Asana

San Francisco, USA

SOFTWARE ENGINEERING INTERN (INFRASTRUCTURE MANAGEMENT)

May 2019 - Aug 2019

- Achieved better infrastructure modularity and significant cost savings by updating in-house Kubernetes deployment framework to allow worker clusters to share AWS EKS control planes. Design document written and circulated internally for future enhancement
- Served twice as Infrastructure Management On-Call to investigate, triage, and fix infrastructure failures and issues such as broken infrastructure due to bad commits, Kubernetes deployment failures, AMI build failures, AWS rate-limiting problems, Datadog alerts
- Shadowed senior Infrastructure engineer as Infrastructure On-Call Trainee to respond immediately to urgent infrastructure failures and outages and approve/deny production change requests. Involved in resolving a major infrastructure outage (2h downtime) due to MySQL database contention issues
- Enable greater developer velocity and erase technical debt by incrementally converting infrastructure scripts from Python2 to Python3
- Avoid regression of this conversion by writing custom lint rules for deprecated behavior using Pylint
- Automated installation of Python3 on all developer machines
- Created a testing framework for these lint rules that are run during the Bazel build process

Autolab

Pittsburgh, USA

PROJECT MAINTAINER (DEVOPS)

Nov. 2018 - Current

- Maintainer of the open source project Autolab under mentorship of Prof. David O'Hallaron in CMU
- Improved product adoption by simplifying Autolab setup flow by using Docker Compose to automate provisioning and configuration of frontend and backend grading servers. Original setup flow was complex and required technical knowledge of Rails, Docker, and Nginx
- Help to support technical issues faced by the public in setting up and configuring Autolab

Saleswhale (YC S16)

Singapore, Singapore

JR. SOFTWARE ENGINEER

Nov. 2017 - Aug. 2018

- Regularly delivered core product features and bug fixes for the main Saleswhale app with Rails, Ember.js, RSpec, Redis, Sidekiq. Contributed to product meetings and sign-offs.
- Empowered the Customer Success team in performing account onboarding, management, and health reporting by architecting and building an internal tool from scratch with Rails, Ember.js, RSpec, SemanticUI, Gulp. Took ownership of it and regularly updated it to support the internal operational requirements of our product roadmap and in response to user feedback
- Drastically reduced product testing times and accelerated feature releases by building and automating the deployment of a testing framework micro-service with Rails, AWS SQS, Docker, Fabric from scratch to mock the asynchronous operations of another bottleneck micro-service
- Took charge of engineering support tickets filed by other departments related to codebase that I am familiar with, and to investigate, prepare, and deploy a fix if necessary
- Helped the Operations team meet key SLAs by developing a Tableau workbook from scratch to return insights on operational metrics and performance
- In charge of the algorithms & data structures segment of the technical interview for hiring new software engineers

Honors & Awards

2019 **Third Place**, Hackberry Pi (Hackathon)

Pittsburgh, PA, USA

2018 **First Place**, Home Invasion 2018 (IoT-CTF)

Singapore

2018 **Silver Award**, Cyber Defenders Discovery Camp

Singapore

2018 **Winner, People's Choice**, NUS Hack&Roll 2018

Singapore

2015 **Silver Award**, National Olympiad in Informatics

Singapore

2015 **Gold Award (Equity Portfolios: Essentials of a Winning Portfolio)**, Singapore Science and Engineering Fair

Singapore