Jiacheng Xu 徐嘉诚

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Experience

Software Engineer
Kubermatic (formerly Loodse)
Nov 2019 - Present (1 year 2 months +)
Building Kubernetes controllers and operators.

Open Source Contributor
Google Summer of Code
May 2019 - Sep 2019 (5 months)
Worked on TensorFlow I/O (https://github.com/tensorflow/io).
Implemented the JSON format support for TensorFlow I/O and make it fully compatible with TensorFlow 2.0.
◦ Related work: https://summerofcode.withgoogle.com/archive/2019/projects/5358647872323584/

Master Thesis Student
EPFL (École polytechnique fédérale de Lausanne)
Feb 2019 - Jul 2019 (6 months)
Master thesis student in Distributed Computing Laboratory(http://dcl.epfl.ch/site/) at EPFL in collaboration with ABB corporate research center, Switzerland.
Thesis title: Container Orchestration in Heterogeneous Fog Environments
◦ Proposed a new scheduling strategy including a re-scheduling mechanism that is based on Mixed Integer Programming (MIP), which takes the resource utilization of nodes in the heterogeneous environments into consideration.
◦ Implemented a new MIP scheduler and an MIP re-scheduler on top of Docker Swarmkit.
◦ Carried out various experiments in both homogeneous and heterogeneous environments, and the results demonstrate a 100% improvement in the capability of container placement in both homogeneous and heterogeneous environments in comparison to native Docker SwarmKit scheduler.

Software Engineer Internship
ABB
Jul 2018 - Dec 2018 (6 months)
Software engineering intern at ABB Corporate Research Center, Switzerland, worked on Performance Prediction for Software Product Lines.
◦ Analyzed and developed methods for creating and maintaining families of related products.
◦ Devised a prediction model for estimating the performance and resource utilization of different product configurations.

Open Source Contributor

Google Summer of Code

Apr 2018 - Aug 2018 (5 months)

Worked on CoreDNS for Cloud Native Computing Foundation (CNCF).

Designed and built an etcd-based CoreDNS plugin for identifying nodes in a cluster without domain name collisions.

- Related work: https://github.com/jiachengxu/idetcd
- CNCF blog: https://www.cncf.io/blog/2018/10/30/gsoc-jiacheng-xu/

Research Assistant

EPFL (École polytechnique fédérale de Lausanne)

Sep 2017 - Jun 2018 (10 months)

2 semester projects in Distributed Computing Laboratory(http://dcl.epfl.ch/site/) at EPFL with grades 6.0/6.0.

Worked on "Reconfiguration, Security, and Testing in a Ring Replication Protocol", main tasks:

- Implemented a reconfiguration protocol based on a conventional all-to-all broadcast primitive.
- Integrated a signature protocol by applying DSA to guarantee the message security.
- Add a garbage collection protocol which prevents stable message logs from growing without bound.
- Conducted unit and integration tests which increase the line coverage from 0% to 65.3 %.

Software Engineer Internship

EPFL Innovation Park

Jul 2017 - Aug 2017 (2 months)

Worked as a software engineering intern at a startup named Auglook.

- Designed a platform for users to upload photos and audios which contain their geographical location.
- Implemented both web and mobile (including iOS and Android) clients of this platform using React Native framework.

Education

EPFL (École polytechnique fédérale de Lausanne)

Master of Science - MS, Computational Science and Engineering

2016 - 2019

Nanjing University

Bachelor of Science - BS, Physics

2012 - 2016

Licenses & Certifications

Functional Programming Principles in Scala - Coursera

4GCVWK7S8HRQ

Skills

Go • Kubernetes • Docker • Distributed Systems • Algorithms

Honors & Awards

Meritorious Winner - COMAP

Apr 2015

Meritorious Winner (top 13%) in 2015 Mathematical Contest In Modeling