Shiyu Wu

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allen-wu.github.io/shiyuwu/

in shiyuwu-96

Work Experience

Software Dev Engineer I

Amazon Web Services

2021/06 - Present

- Seattle, WA, U.S.
- Work in EC2 Virtual Private Cloud (VPC) Border Gateways team.
 The team owns services of manipulating & translating packets of all network traffic inbound/outbound EC2 to support VPC use cases.
- Engage in **Crow** project which provides EC2 instance's low latency access to DynamoDB through point to point connection. Work on feature support in NAT's packet process pipeline in C/C++. This feature aims to reduce medium read latency from 3.0ms to 0.9ms.
- Delivered SYN Flood Protection for S3inEC2 project by developing TCP-SYN proxies in NATs for S3 endpoints DDoS attack protection. Developed cryptographic salt generation system using AWS CDK. Built on-NAT config and salt pullers and control CGI in Python. Established relevant metric monitors and alarms. This security feature is a must-have as part of S3 scaling activities.
- Regularly oncall and improve team-owned services' operations.

Software Engineer Intern

Amazon Web Services

2020/05 - 2020/08

Austin, TX, U.S.

- Interned at EC2 VPC Dataplane team under EC2 Networking.
- Delivered Path Maximum Transmission Unit Discovery feature in C/C++ in NAT's dataplane for handling traffic between EC2 and S3. Completed feature-relevant unit, behave, performance tests, and published metrics for feature monitoring.
- \bullet The feature introduces <1% performance overhead with security insurance and extensibility. It allows faster packet loss recovery and provides more control of large packet traffic.

Software Engineer Intern

Flexiv Robotics

2019/06 - 2019/08

- Shanghai, China
- Worked on distributed deep learning framework Horovod, BytePS, and data processing library DALI.
- Built up servers' distributed training platform based on two frameworks. Implemented tailored data loading operators in DALI for object detection training. Achieved 2.5x training speed boosting.

Teaching Assistant

University of Texas at Austin

2019/08 - 2021/05

- Austin, TX, U.S.
- Algorithms: Techniques & Theory (Graduate Level)
- Computer Organization & Architecture: Instructed students in basic computer system knowledge and hacking systems in C.
- Advanced Computer Architecture: Instructed students in topics of out-of-order execution and advanced memory system techniques.
- Data Analysis & Visualization: R, SQL, Python instruction.

Teaching Assistant

University of Michigan - Ann Arbor

2018/09 - 2019/05

- Ann Arbor, MI, U.S.
- Database Management System: Designed the course project, Grace Hash Join, in C++ and set up the online Autograder. Instructed students in database theory, design, implementation, SQL.

Education

University of Texas at Austin

M.S. in Computer Science

2019/08 - 2021/05

Austin, TX, U.S.

GPA: 3.97/4.0

University of Michigan - Ann Arbor B.S.E. in Computer Science

2017/09 - 2019/05

Ann Arbor, MI, U.S.

GPA: 3.97/4.0, Summa Cum Laude

Shanghai Jiao Tong University

B.S.E. in Electrical & Computer Engineering

2015/09 - 2019/08

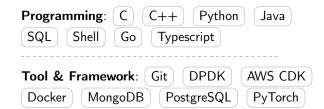
Shanghai, China

GPA: 3.75/4.0, Rank: 7/205

Honors & Awards

- National Scholarship (Top 0.2%) 2016/09
- King, Roger Scholarship 2018/08, 2019/01
- SJTU Outstanding Graduate 2019/06
- Jun Yuan Scholarship (Top 2%) 2016/11

Technical Skills



Publications

Conference Proceedings

- French, K., Wu, S., Pan, T., Zhou, Z., & Jenkins, O. C. (2019). Learning behavior trees from demonstration. In 2019 international conference on robotics and automation (icra) (pp. 7791–7797). IEEE.
- Zhou, Z., Pan, T., Wu, S., Chang, H., & Jenkins, O. C. (2019). Glassloc: Plenoptic grasp pose detection in transparent clutter. In 2019 ieee/rsj international conference on intelligent robots and systems (iros) (pp. 4776–4783). IEEE.