

Shiyu Wu

✉ allenshiyuwu@gmail.com

☎ (+1)734-263-7612

🌐 allen-wu.github.io/shiyuwu/

📄 [allenshiyuwu](#)

Work Experience

Software Dev Engineer I

Amazon Web Services

📅 2021/06 - Present

📍 Seattle, WA, U.S.

- Work in EC2 Networking Gateway Networking team. We owns "Blackfoot" fleet that performs packet encapsulation & translation of all traffic between EC2 and S3 & DynamoDB.
- Delivered **Crow** project, a new EC2 Networking protocol, which provides EC2 instance's low latency access to DynamoDB through point to point connection. Contributed to feature support on Blackfoot in C/C++/Python. Led the feature operational work, VPC gateway-style endpoints support and world wide release for the team. Conducted integration testing with partner teams. This feature reduces medium read latency from 3.0ms to 0.9ms.
- Delivered **SYN Flood Protection for S3inEC2** project by developing TCP-SYN proxies on Blackfoot for S3 endpoints DDoS attack protection. Developed cryptographic salt generation system using AWS CDK. Built on-host config and salt sync and control workflows in Python. Established relevant metric monitors and alarms. This security feature is a must-have as part of S3 scaling activities in EC2.
- Mentored one intern for successfully delivering Blackfoot Dataplane Health Monitoring project.
- Regularly oncall and improve team-owned services' operations.

Software Engineer Intern

Amazon Web Services

📅 2020/05 - 2020/08

📍 Austin, TX, U.S.

- Interned at AWS EC2 VPC Dataplane team with return offer.
- Delivered **Path Maximum Transmission Unit Discovery** feature in C/C++ in Blackfoot's dataplane for traffic between EC2 and S3 NLB. Completed feature-relevant unit, behave, performance tests, and published metrics for feature monitoring.
- 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.

Teaching Assistant

University of Texas at Austin

📅 2019/08 - 2021/05

📍 Austin, TX, U.S.

- CS388G - Algorithms: Techniques & Theory (Graduate level)
- CS429 - Computer Organization & Architecture
- CS350C - Advanced Computer Architecture
- MKT382 - Data Analysis & Visualization

Teaching Assistant

University of Michigan - Ann Arbor

📅 2018/09 - 2019/05

📍 Ann Arbor, MI, U.S.

- EECS484 - Database Management System

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

Programming:

C

C++

Python

Shell

Typescript

Rust

SQL

Tool & Framework:

Linux

DPDK

Git

AWS CDK

NoSQL

PyTorch

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.