

Oliver (Ziqi) Zhang

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EDUCATION

University of Michigan - Ann Arbor, MI	Sep. 2018 - Dec. 2020
B.S. in Computer Science Minor in Business at Ross School of Business	GPA 3.93/4.00
University of Rochester - Rochester, NY	Sep. 2016 - May 2018
B.S. in Computer Science, B.A. in Business Minor in Japanese	GPA 3.96/4.00

WORK EXPERIENCE

Google - Google Cloud, Software Engineering Intern; Remote	May. 2020 – July 2020
<ul style="list-style-type: none">Designed a project for the integration testing of the OpenCensus tracing feature using C++ gRPC lib on GKECreated Sampling API for the tracing feature in OpenTelemetry to balance observability and loadIntegrated Sampler with the existing components and unit tested all parts with 100% code coverageRanked #4 Top Contributor to the OpenTelemetry C++ project and led one of the eight Alpha 0.2 milestones	
University of Michigan - Security Lab, Research Assistant; Ann Arbor, MI	Apr. 2019 – Present
<ul style="list-style-type: none">Designed object detection program using TensorFlow and OpenCV to defend against adversarial attackProposed novel methods to accelerate adversarial training and to diagnose models using PyTorch and TF	
LiveRamp - Backend Engineering Intern; San Francisco, CA	May. 2019 - Aug. 2019
<ul style="list-style-type: none">Revamped a Hadoop workflow using Zookeeper to solve a filesystem deadlock problem on GCPRefactored Hadoop workflows and created new services to migrate jobs from VM to KubernetesUpgraded Rails dashboards with a load balancer using Ambassador and Terraform to externalize APIsCollaborated with the legal team to automate the data ethic review process. Created a web program in JavaScript to parse data and filter out unethical information and won 2nd place in HackWeekCreated a Java API to retrieve service id from customers' service requests	
Microsoft Research Asia - Engineering Intern; Beijing, China	Jun. 2017 - Aug. 2017
<ul style="list-style-type: none">Initiated a web app project in JS which creates personalized posters to attract more Hackathon participantsConducted the Hackathon campaign with the web app and videos and improved participation by 30%Maintained and updated the official site of Microsoft Asia-Pacific R&D and internal sites	

PUBLICATIONS

- H Zheng, **Z Zhang**, H Lee, A Prakash. Understanding and Diagnosing Vulnerability under Adversarial Attacks. arXiv:2007.08716.
- H Zheng, **Z Zhang**, J Gu, H Lee, A Prakash. Efficient Adversarial Training with Transferable Adversarial Examples. In CVPR, 2020.

PROJECT EXPERIENCE

Thread Library and Pager in C++

- Implemented an uniprocessor library, including cpu, thread, mutex, cv, for multi-threaded programs
- Wrote a pager to handle the creation, switching and destruction of swap and file-back virtual page

iPerf and load-balancing CDN Implementation in C

- Created an CDN with DNS load balancing and adaptive bitrate selection to stream video to clients
- Used VirtualBox and Mininet to create virtual networks and measured the network performance
- Implemented an iPerf program in C that uses TCP packets to benchmark network bandwidth

Database Structure Implementation in C and C++

- Implemented linear hashing index, external merge sort and grace hash join using C++
- Wrote a mini database which includes a primary and a secondary index, basic operations such as Selection, Projection and Join and SQL command parser

SKILLS

Programming Languages and tools

- C, C++, Java, Python, Tensorflow, PyTorch, OpenCV, SQL, HTML, Ruby on Rails
- Hadoop, Cascading, GCP, gRPC, Docker, Bazel, Kubernetes, OpenTelemetry, Terraform, gtest