

# Peiyuan Qi

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## EDUCATION

<b>University of Southern California (USC)</b> , Los Angeles, CA	GPA 3.6/4.0
<i>Master of Science in Computer Science</i>	Aug 2018 – Jan 2020
<b>Shanghai Jiao Tong University (SJTU)</b> , Shanghai, China	
<i>Bachelor of Science in Electrical and Computer Engineering Graduate With Honors</i>	Sept 2014 – Aug 2018
University of Michigan – Shanghai Jiao Tong University Joint Institute (UM-SJTU JI)	GPA 3.6/4.0

## SKILLS

Java, Python, C++, gRPC, Kafka, Flink, Storm, Spark, Zookeeper, AWS, Kubernetes, Docker, Terraform, Nginx, Spring, Hadoop, Prometheus, KairosDB, MongoDB, MySQL, Fluent, Grafana, Kibana.

## PROFESSIONAL & RESEARCH EXPERIENCE

<b>Electronic Arts Inc. (EA)</b>	Redwood City, CA
<i>Software Engineer II</i>	Feb 2020 - Present
<ul style="list-style-type: none"><li>Designed and implemented gRPC microservice in AWS Elastic Kubernetes Service (EKS) to accept data for all EA games;</li><li>Migrated EA data gateway service from classic cloud instances into AWS EKS with autoscaling to save 50% current budget;</li><li>Conducted load test of more than 5k/s per vCPU to critical data gateway to examine the robustness of new service;</li><li>Built the metrics reporting and anomaly detecting system for real-time data pipeline system with KairosDB and CloudWatch;</li><li>Implemented Flink data pipeline component to replace Storm topology to improve performance and budget efficiency.</li><li>Implemented Flink real-time data pipeline prototype to replace batch processing pipeline saving 90% time;</li><li>Operated cloud data clusters of size more than 500 instance with different environments for meeting capacity demand;</li><li>Improved stability of legacy Apache Storm topologies and internal framework with bug fixing and code changes.</li></ul>	
<i>Software Engineering Internship</i>	May 2019 – Aug 2019
<ul style="list-style-type: none"><li>Researched and fixed the bugs caused by asynchronous threads to reduce the data corruption rate in the production cluster;</li><li>Implemented container graceful shutdown mechanism in Spring Framework to avoid data loss in cluster auto-scaling process;</li><li>Designed EKS monitor job for the cluster to report current cluster pods number for downstream data pipeline in Python.</li></ul>	
<b>Intel Asia-Pacific Research and Development Ltd.</b>	Shanghai, China
<i>Software Engineering Internship</i>	May 2018 – Aug 2018
<ul style="list-style-type: none"><li>Improved admin access API design to meet RESTful requirements for Hadoop Authentication Service for Apache Kerby;</li><li>Submitted changes in two HAS command-line tools following Adapter Pattern and the open-source community accepted;</li><li>Implemented Hadoop Smart Storage Manage integration automated quality verification scripts using Python.</li></ul>	
<b>NVIDIA Semiconductor Technology Co., Ltd.</b>	Shanghai, China
<i>Software Engineering Internship</i>	Aug 2017 – Apr 2018
<ul style="list-style-type: none"><li>Designed a Perl Object Oriented Module to post more than 140,000 GPU simulation data per day to Elastic Search;</li><li>Devised and delivered a Python package for Elastic Search data retrieve and data manipulation with RESTful principles;</li><li>Applied doc2vec and WMD algorithms to perform the software Bug Triage tasks to improve team debugging efficiency.</li></ul>	
<b>Intelligent Decision Making (IDM) Lab</b>	Los Angeles, CA
<i>Graduate Research Assistant</i>	Jun 2019 – May 2019
<ul style="list-style-type: none"><li>Implemented conflict-based search solution Python package for hierarchical Multi-Agents Paths Finding system.</li></ul>	

## ACTIVITIES

<b>HackTech 2019</b>	Pasadena, CA
2019 Best Hack that Acts on the Physical World - Sponsored by Uber (Team Member)	Mar 2019
<ul style="list-style-type: none"><li>Developed an emergency Uber requesting application for Fitbit smart band when user has severe health problem with Uber API.</li></ul>	

## SELECTED PROJECTS

<b>Happy Contra, an iOS Mobile Game</b>	Jan 2019 – May 2019
<ul style="list-style-type: none"><li>Designed and developed a mobile run-and-gun 2D platformer game with puzzle solving mechanism using Unity game engine.</li></ul>	
<b>JOS Kernel Development in C</b>	Aug 2018 – Nov 2018
<ul style="list-style-type: none"><li>Implemented the memory initializing, exception and interrupt trapping on x86 machine an Exokernel named JOS individually;</li><li>Constructed the fork, process preemption, inter-process communication, network communication mechanism on JOS.</li></ul>	
<b>Distributed Transaction Settlement System</b>	Jun 2018 – Jul 2018
<ul style="list-style-type: none"><li>Achieved a Distributed Transaction Settlement System based on Hadoop and Spark Streaming in a group of three;</li><li>Created a currency server maintained with Zookeeper updated by three concurrent threads;</li><li>Implemented the backend storage in MongoDB and dealt incoming concurrent transactions with Kafka.</li></ul>	
<b>International Programs Application and Management System, A Full-Stack Website Project</b>	Apr 2018 – Aug 2018
<ul style="list-style-type: none"><li>Developed the online system for UM-SJTU JI based on Laravel with around 1000 users with Object-Oriented Design Principles;</li><li>Designed the database patterns including many-to-many, one-to-many associations to support application needs.</li></ul>	