Peiyuan Qi

+1 (213) 255-6802 | peiyuanqi@gmail.com | Linkedin

PROFESSIONAL EXPERIENCE

Google LLC. (Google) Sunnyvale, CA
Software Engineer – Tech Infra - Demand & Supplychain Management *Jun. 2021 - Present*
- Managed multiple software programs as Tech Lead of the domain services in the organization, for data center modeling.
- Launched multiple successful cross-organizational programs without outages, which outcomes are featured in external documents and news: GKE Compact Placement, TPU v5e, A3 GPU, Trusted Partner Cloud program, saving the company $XXX million per projects, and opening market of $X billions, cooperated closely with principle engineers John Wilkes, Jeff Mogul.
- Led multiple task forces (six engineers) for design and implementation from datacenter supplychain software in programs.
- Led the key transformations of Google's GPU deployment strategy, from A3 to more powerful GPU machine racks, with high level design, project requirement doc, approved engineering reviews, cooperation with technical program managers.
- Defined the Application Protocol Interfaces and Service Level Objectives for new and legacy backend services.
- Sympathized with stakeholders (ML, Cloud customers) in need of the tooling to fulfill the business needs, by actively interviewing the customers, with product descriptions doc, business contracts, and operation protocols.
- Engineered the asynchronized task management system in GUI to improve user experience using internal workflow framework.
- Solved various data consistency issues across long business logic pipeline cross teams and orgs, with various software solutions.
- Migrated the original data format into the new format supporting branching and what-if situation essential for navigating the volatile supply chain demands of ML.
- Transformed the existing DOM object rending method to WebGL with Entity Component System model using threejs as a team, with Data Oriented Design principle. Developed frontend features with Angular and Typescript, backend features with Python and Java servers. Provided monitoring, metrics reporting and alerting supports with internal tools.
- Maintained the mathematical solver (CP-SAT/MIPS) for machine rack locations in Datacenter based on Power, Network, Space, Cooling constraints. Maintained the business-critical services with service debugs, release rollouts, Database managements.
- Explored the possibility of employing Reinforcement Learning model to replace the math solver.

Electronic Arts Inc. (EA) Redwood City, CA
Software Engineer – EA Data & AI Platform *Feb 2020 – Jun 2021*
Software Engineering Internship *May 2019 – Aug 2019*
- Developed the container images for legacy Spring Boot socket server and laid out the infra to onboard the app into AWS EKS as pathfinding engineer in the org. And conducted the stress test up to 5k QPS to ensure the robustness and the autoscaling ability.
- Overcame the technical obstacles by communication with opensource contributors of load balancing middleware.
- Built the service monitoring, business reporting, and alerting with the KairosDB, CloudWatch, Elasticsearch, Kibana.
- Migrated EA data gateway service from cloud instances into AWS EKS with autoscaling to save 50% current budget.
- Owned the Kafka and Apache Storm for the real-time metrics processing supporting the billing of the games.
- Worked on the migration of the Apache Storm cluster into the Flint to unify the real-time and batch data pipeline.

Intel Asia-Pacific Research and Development Ltd. Shanghai, China
Software Engineering Internship – Big Data Group *May 2018 – Aug 2018*
- Worked on RESTful API design and command line tool delivery in open-source community.

NVIDIA Semiconductor Technology Co., Ltd. Shanghai, China
Software Engineering Internship - SHAI *Aug 2017 – Apr 2018*
- Applied doc2vec and WMD algorithms to perform the Bug Triage tasks to improve team debugging efficiency.

EDUCATION

University of Southern California (USC), Los Angeles, CA
Master of Science in Computer Science *Aug 2018 – Jan 2020*
Shanghai Jiao Tong University (SJTU), Shanghai, China
Bachelor of Science in Electrical and Computer Engineering Graduate with Honors *Sept 2014 – Aug 2018*
University of Michigan – Shanghai Jiao Tong University Joint Institute

SKILLS

Python, Java, gRPC, Angular, Typescript, Streaming Pipeline, Kafka, Storm, Zookeeper, Kubernetes, Docker, Nginx, Spring, Hadoop, Prometheus, C++, Figma. Google Internal Tools (Service Platform Boq/Pod, Stubby, PubSub, Spanner, Flume, Gaia, Ganpati, MDB, UberProxy, Stubby, Spanner, Plx, Sigma, Analog, Automon, SilkRoads).

OTHER PROJECTS

Hot Glue Epoxy Resin I, A Radio-Controlled Sailboat with Autonomous Navigation Nov 2021 – 2022
- Built the radio control and data telemetry system with Frsky transmitter and OpenTX.
- Experimented GPS and wind/water sensors based autonomous navigation with ArduPilot.