Jing (Felicia) Ma

(617) 902-8536 | jing.felicia.ma@gmail.com | linkedin.com/in/Felicia1994

Skills

Languages: C++ (fluent), Python3 (fluent), Go, SQL, Java, Fortran, R, MATLAB, Javascript

Tools & Skills: Google Cloud, AWS, Linux, Git, Vibe Coding, Machine Learning Libraries, Docker

Soft Skill(s): Problem Solving, Teamwork and Cross-Team Collaboration, System Design, Critical Thinking, Documentation, Modeling

Work Experience

Google | *C++, Python3, Go, Java, GoogleSQL* — Chicago, IL / New York City

Software Engineer, Security and Privacy, Google Cloud Platform (GCP) — *Sep. 2023 – present*

- Maintaining the administrative access control core storage (ACS) system, that enforces security constraints on Googlers' access to customer data, based on data sensitivity annotations and product security enrollments; developing features that support controls on more GoogleSQL keywords, new data sensitivity categories, and additional compliance requirements, which allows more product teams to achieve data security compliance with unified and robust tools.
- Led design discussions and development of an alternative data protection strategy, that allows products with lower security risks to meet Department of Defense (DoD) Impact Level 4 and 5 (IL4 and IL5) requirements with significantly reduced efforts. Certain workflows achieved as much as 90% reduced effort estimates with this alternative approach. Also conducted reviews with Google's chief information security officer (CISO) and achieved agreements on data freshness SLOs.
- Migrated and extended our administrative access control systems to trusted partner cloud (TPC) universes, that address strict sovereignty requirements in Europe and APAC by providing isolated cloud instances, and ensuring that data is stored and handled locally.

TuSimple | *C++, Python3, PostgreSQL, ROS, Docker, AWS* — San Diego, CA

Software Engineer, Machine Learning Infrastructure — *Jun. 2022 – Jul. 2023*

- Maintained the simulation platform that allows for the creation and editing of scenarios, and provides performance evaluations for algorithm modules; actively discussed with our client teams, and delivered timely and reliable updates to the platform.
- Maintained databases of simulation scenarios and task results, and extended their structures to allow for more flexibility in testing cases design, and to deliver user-friendly performance results.
- Independently designed and developed the pipeline to regenerate datasets synchronously and reproducibly, through **ROS** requests and responses; deployed to production, the new pipeline has proven to significantly reduce in overhead, run comparably to or even faster than the asynchronized version, on average, and also fixed the frame loss issue.

Software Engineer Intern, Simulation Platform — *May. 2021 – Aug. 2021*

- Maintained the backend of the simulation platform (e.g., unified the standard of frame alignments, redesigned the frame logic to ensure consistency in results replay), and added new functionalities to support internal and external needs.
- Refactored the metrics system for the simulation platform, decoupled the evaluation process from running, and thus enabled the capability of future-dependent as well as history-dependent evaluators.

Education

Boston University — Boston, MA

Ph.D. in Physics; Master of Arts in Physics — *Sep. 2015 – May. 2022*

- The 2019 – 2020 Outstanding Teaching Fellow in the Department of Physics (recognized by the Graduate School of Arts & Sciences, Boston University)

Peking University — Beijing, China

Bachelor of Science in Physics; Bachelor of Economics — *Sep. 2011 – Jul. 2015*