

Ping-Min Lin

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Experience

Pinterest, Data Engineering, Logging Platform Team

Feb. 2018 -

Software Engineer

Palo Alto, CA

- Co-developed MemQ, an open-source data ingestion system that provides scalable, efficient near real-time streaming with pluggable storage. Reduced **90%** cost footprint compared with Kafka counterpart topics, transporting more than **5TB/day** of production workloads with end-to-end latencies **under 10 seconds**.
- Designed Orion, an open-source centralized operation automation framework designed to manage distributed systems. Internal Kafka deployment managed **>2500** hosts serving **>20TB/day** with **>500/yr** broker failures remediated without human intervention.
- Optimized various Kafka operations: Developed topic assignment strategy to provide more robust performance and simpler load-balancing methods. Published articles describing a novel approach to achieve load-balancing using graph algorithms. Implemented concurrent operation execution algorithm for broker operations, speeding up upgrades and maintenance on clusters by **more than 300%**.

Uber, Core Infrastructure, uMetal Software Platform Team

May 2018 - Aug. 2018

Software Engineer Intern

San Francisco, CA

- Implemented endpoint on Uber edge gateway to external service supporting OAuth2.0 with node.js and Thrift.
- Developed self-healing module for asset management service in Go, robustly reconciling data between sources of truth and communicating with third-party services using Kafka.
- Created CLI tool in Go to fetch asset information from production environment from development machines via proxies, deployed tool to internal Homebrew cask.

Aidmics Biotechnology

Aug. 2016 - Jan. 2017

Software Development Engineer

Taipei, Taiwan

- Incorporated Slack Bot API and email with Nodemailer into payment process, improving workflow and reducing delivery time by pushing realtime order notifications to sales team.
- Refactored Node.js product site back-end into RESTful API, implemented new payment and discount system compatible to Paypal SOAP API and extendable interfaces for future payment methods.

IBM Taiwan, China Development Lab, Security Team

Jul. 2015 - Jan. 2016

Software Development Intern

Taipei, Taiwan

- Developed PoC for intrusion protection as a cloud service with Node.js and iptables on self-hosted Cloud Foundry instance and multi-tenant Openstack environment.
- Demonstrated a packet inspector utilizing Netfilter/NFQUEUE inside Docker containers by implementing daemons written in C, handling throughputs over 10Gbps.
- Co-invented *Seamless Abort and Reinstatement of TLS Session (US Patent 20180020020)*, a method allowing passive inspectors to transparently handle existing TLS connections with resumption.

Education

Carnegie Mellon University, School of Computer Science

Dec. 2018

M.S. in Computer Science GPA: 3.85/4.0

Pittsburgh, PA

National Taiwan University

Jan. 2017

B.S. in Electrical Engineering and B.B.A in Finance GPA: 3.98/4.0

Taipei, Taiwan

Skills

Programming Languages Java, Python, C/C++

Tools/Frameworks Kafka, AWS, Jenkins, Netty, Linux, React.js, Docker