CHUN-MING(Jimmy) LIN

(+1)217-979-9976 linkedin.com/in/chun-ming-lin   https://jimmy-0.github.io/Jimmy_Lin/   cminglin248@gmail.com

Education

University of Illinois at Urbana-Champaign (GPA: 3.6/4.0)   Chicago, IL
Master of Engineering (M.Eng.) - Electrical and Computer Engineering   Sep. 2021-Dec. 2022
- Coursework: Distributed Systems, Parallel Programming, Blockchains, Reliability of cloud-scale computing, Database System, Wireless Network

National Taiwan Ocean University (GPA: 3.6/4.0)   Keelung, Taiwan
Bachelor of Science (B.S.) - Marine Engineering   Sep. 2016-Jun. 2020

Technical Skills

- Languages: **Python**, Rust, MySQL, Solidity, React, Node.js, CUDA
- Developer Tools: Git**, Kubernetes**, Linux
- Frameworks: Docker, Redis, Neo4j, **AWS**
- Certificate: AWS Certified Cloud Practitioner, AWS Certified Solution Architect Associate – In Progress

Projects

Microservice system |**Docker, Kubernetes, RabbitMQ**   May 2023
- Deployed the gateway, authentication_service, convert_service, and notification_service in a Kubernetes private cluster with at least 2 replications for high availability.
- Achieved asynchronous communication by utilizing RabbitMQ as the message queue.
- Implemented a notification_service that consumes messages from the queue and sends email notifications to clients.

Keyword Extractor - *OpenAI ChatGPT with React and Chakra UI* | **React**   May 2023
- Achieved seamless integration with React and Chakra UI to provide a user-friendly front-end interface and implemented a single-click functionality for users to input text and trigger keyword extraction.
- Utilized the OpenAI API to communicate with the ChatGPT model and obtain keyword extraction results.
- Demonstrated efficient and intuitive keyword extraction for tasks such as content analysis, SEO optimization, and research.

CoruscantGraph-*tracing ecosystem for span reliability inference*| **Rust, Python**   February 2022
- Accomplished modeling system reliability dependence in micro-scale by using tracing spans and subscribers
- Performed fault injection experiments on Raft protocol to analyze the dependence of system reliability in micro-scale
- Visualized the probability between each component using python

Chivago – *A hotel management system* | **React, Node.js, MySQL, AWS**   December 2022
- Optimized database queries using MySQL triggers and procedures for enhanced query efficiency
- Implemented a RESTful API with CRUD functions using Node.js, integrated modules and validated interactions across modules through the use of observability tools
- Deployed and configured the project on AWS Elastic Beanstalk while incorporating observability principles

Raft in Python | **Python**   September 2021
- Distributed a state machine across a cluster, ensuring that each node agrees with the same state transitions
- Implemented Leader Election, Log Replication, and Log Persistence to enhance fault tolerance in the cluster
- Troubleshot concurrency issues in a simulated distributed system and reduced system fail rate from 0.1% to 0.01% through the use of observability tools

Distributed Key-Value Database | **Python**   September 2021
- Implemented a distributed key-value database supporting simple SQL sentences for CRUD operations
- Implemented RAFT algorithm for leader election and log replication to achieve consensus among servers
- Ensured ACID properties through Two-Phase Lock and created a coordinator for Deadlock resolution, all while incorporating observability principles

CNN Inference Optimization | **CUDA**   September 2021
- Demonstrated command of CUDA and designed optimized approach to be utilized on CNN
- Implemented the GPU optimization techniques, such as kernel fusion and tiled shared memory convolution
- Obtained practical experience in analyzing and fine-tuning CUDA kernels with profiling tools

Experience

Royal Van Oord Marine Ingenuity   Changhua, Taiwan
Purchaser — Greater Changhua offshore wind farms project   December 2020 - July 2021
- Developed, compiled sourcing prerequisites and ensured secure timely hand-over to the sourcing buyer
- Assured priority-based, on-time delivery based on open PO lines in the SAP system
- Designed and implemented an inventory tracking system among 12 vessels using Excel

Achievement

Undergrad achievement   September 2016 - June 2020
- Academic Excellence Award