CHUN-MING(Jimmy) LIN

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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

- Coursework: Application of Micro-controller, Digital Integrated Circuit Design, Operating System

Technical Skills

- Languages: **Python**, Rust, MySQL, JavaScript, C, Java, Golang, Solidity, React, Node.js, CUDA
- Developer Tools: Git**, Kubernetes**, Linux
- Technologies/Frameworks: **Vue.js**, **Docker**, Redis, **Neo4j**, **Django**, **AWS**, GCP, GitHub, AutoCAD
- Certificate: AWS Certified Cloud Practitioner, AWS Certified Solution Architect Associate – In Progress

Personal Link

- Portfolio page: https://jimmy-0.github.io/Jimmy_Lin/
- GitHub: github.com/Jimmy-0

Projects

Chivago *– A hotel management system* | **React, Node.js, MySQL, AWS** December 2022

- Accomplished optimized query using MySQL trigger and MySQL procedure for greater query efficiency
- Implemented RESTful API with CRUD functions using Node.js. Integrated modules into application and validate the interactions across modules as measured by user experience
- Deployed and configured the project by using **AWS Elastic Beanstalk**

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
- Achieved relation inference analysis between components as measured by performing fault injection experiments on Raft protocol
- Visualized the probability between each component using python

Bitcoin Client (Blockchain) |**Rust** February 2022

- Developed a Bitcoin Client that provides block mining (Proof of work), block propagation, concurrent transaction (account-based model) processing while ensuring consistency with Rust
- Implemented the peer-to-peer network with gossip protocol to exchange data among blocks
- Accomplished valid transactions among blocks by maintaining a state for the ledger

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 improve fault tolerance in the cluster
- Troubleshot concurrency issues in simulated distributed system, reduced system fail rate from 0.1% to 0.01%

Distributed Key-Value Database | **Python** September 2021

- Supported simple SQL sentences to Create, Read, Update and Delete (CRUD) key-value pair
- Implemented RAFT algorithm for leader election and log replication to achieve consensus among servers
- Accomplished (ACID) by applying Two-Phase Lock and created a coordinator for Deadlock resolution

CNN Inference Optimization | **CUDA, nvprof (Nvidia Profiler)** 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