YANGYE FU ⚲ Fremont, California

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Brief Bio

I am a full-time software engineer working at MiTAC Information Systems Corp., dedicated to internal service architecture design & development. I love CS, math, and physics, with interests and project experiences in Artificial Intelligence, Operating Systems, Compilers, and Networked Systems.

Work Experience

Software Engineer   **Apr. 2024 – Present**
Mitac Information Systems Corp   Newark, California
- **Spearheaded** multiple software projects from conception to development, showing **full-cycle** development ownership.
- Engineered a core service in **Go** with the Gin framework to provide a **unified database access interface**, featuring automated management of multiple databases, connection pools, and thread-safe transactions.
- Architected a **multi-tiered service infrastructure** with a reverse proxy to manage internal & external API requests.
- Designed and developed a secure **authentication service** and **API gateway** in Go, implementing **Role-Based Access Control (RBAC)** for API routes using JWT.
- Developed robust **RESTful API** services in Python with FastAPI for CRUD operations on database entities and the generation of data reports.
- Successfully **refactored and upgraded** a legacy .NET client application to use Oracle.ManagedDataAccess, eliminating the dependency on Oracle Instant Client for end-users.
- **Led the migration** of internal codebases from TFS to GitLab, establishing a modern version control workflow and improving development efficiency.
- Established **CI/CD pipelines** to automate and streamline service deployments using Docker containers, orchestrated with **Docker Compose** for a declarative and version-controlled infrastructure.
- Re-engineered a Xamarin mobile application in **Flutter** for warehouse logistics management, successfully deployed it to over 100 handheld devices across multiple warehouses.
- Maintained and enhanced **mission-critical internal systems**, including the Shop Floor Control System (SFCS) and Logistic Information System (LIS), utilizing C# (.NET), ASP.NET, DevExpress, and PL/SQL.

Education

University of California, San Diego   **Sep. 2022 – Mar. 2024**
MS in Computer Science, **Cumulative GPA: 4.0/4.0**   La Jolla, California

University of Electronic Science and Technology of China   **Sep. 2018 – Jun. 2022**
BEng in Computer Science and Technology, **Cumulative GPA: 3.96/4.0**   Chengdu, China

Technical Skills

Languages: Python (6 yrs.), C/C++ (5 yrs.), Go (2 yrs.), Java (2 yrs.), Rust (1 yr.), C# (1 yr.)
Developer Tools: Visual Studio, VS Code, PyCharm, Vim, Toad, Git
Technologies/Frameworks: FastAPI, Gin, Docker Compose, Flutter, PyTorch, LaTeX, Linux, MPI, CUDA C, Qt

Projects

Snek Compiler | *Rust, Cargo, NASM, Makefile* | GitHub Link   **Apr. 2023 – Jun. 2023**
- Developed an x86_64 compiler for a Lisp-like language called `snek` using Rust.
- Implemented a parser for the abstract syntax tree (AST) leveraging Rust's pattern matching capabilities.
- Successfully implemented core language features including numerical and logical operators, variable bindings, conditional and loop statements, functions adhering to System V ABI's calling convention, and tuple-based structured data.
- Implemented a garbage collector using the LISP 2 mark-compact algorithm to manage memory automatically.

Surf Store | *Go, gRPC, Protobuf, Raft, SQLite* | GitHub Link   **Jan. 2023 – Mar. 2023**
- Engineered a distributed, decentralized file synchronization system from the ground up.
- Designed and implemented a key-value store for block-level data storage, with a local SQLite index for efficient client-side metadata lookups to decouple metadata and content storage across distributed servers.
- Utilized gRPC and Protocol Buffers to define efficient, strongly-typed client-server communication protocols.
- Implemented a consistent hash ring for deterministic data placement and retrieval, ensuring balanced load distribution.
- Guaranteed system reliability and fault tolerance by integrating the Raft consensus algorithm for the metadata service.

Publications

[1] **Yangye Fu**, *Ming Zhang, Xing Xu, Zuo Cao, Chao Ma, Yanli Ji, Kai Zuo, Huimin Lu*; Partial Feature Selection and Alignment for Multi-Source Domain Adaptation; Proceedings of the IEEE/CVF Conference on **Computer Vision and Pattern Recognition (CVPR)**, 2021, pp. 16654-16663 (Paper Link)