YANGYE (JEFF) FU La Jolla, California

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Brief Bio

I am a second-year master's student at University of California, San Diego. I love CS, math, and physics, with interests and experiences in Artificial Intelligence, Operating Systems, Compilers, and Networked Systems.

Education

University of California, San Diego   **Sep. 2022 – Mar. 2024 (Expected)**
MS in Computer Science, **Cumulative GPA: 4.0/4.0**   La Jolla, California
  - Relevant Coursework: Principles of Computer Operating Systems, Graduate Networked Systems, Compiler Construction

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
  - Relevant Coursework: Data Structure and Algorithm, Software Engineering, Principles of Computer Organization, Computer Architecture, Computer Operating System, Computer Networks, Applications of Database, Principles of Compilers, Assembly Language and Microcomputers, Artificial Intelligence, Distributed & Parallel Computing
  - **Awards**: Excellent Student Scholarship, Excellent Undergrad Thesis Award

Working Experience

Deep Learning Research Assistant   **Oct. 2019 – Jun. 2022**
UESTC Center for Future Media   Chengdu, China
  - Proposed a method for multi-source domain adaptation by aligning partial features, served as an important contributor in the group, and implemented the model in Python with PyTorch as the deep learning framework
  - Delivered weekly progress reports and participated in group meetings with the advisor and fellows actively
  - Composed the **Statement of Claims of a patent** for the method that reduces the distribution gaps among domains
  - Published a research paper as the **first author** at the top-tier conference IEEE/CVF **Conference on Computer Vision and Pattern Recognition (CVPR)**

Crawler Engineer Intern   **Jun. 2020 – Jul. 2020**
Sichuan Hwadee Information Technology Ltd.   Chengdu, China
  - Used Scrapy crawler engine to collect movie metadata from IMDb Top 1000 rated movies
  - Generated target pages and stored links into a Redis server, preprocessed the data as required by fellow data analyst
  - Wrote a script to store the data into a MySQL database provided by back-end engineer

Projects

Snek Compiler | *Rust, Cargo, NASM, Makefile* | GitHub Link   **Apr. 2023 – Jun. 2023**
  - An x86_64 compiler for snek (Lisp-like) language
  - Parsed the abstract syntax tree (AST) using Rust pattern matching and implemented numerical and logical operators, variable binding, if statements, loop statements, function calls, and structured data (tuples)
  - Followed the calling convention of System V ABI and garbage collection through LISP2 mark-compact algorithm

Surf Store | *Go, gRPC, Protobuf, Raft*   **Jan. 2023 – Mar. 2023**
  - A distributed and decentralized file synchronization system
  - Implemented a key-value store for file content blocks, separated file metadata and contents into distributed servers
  - Defined communications among clients, meta servers, and block servers via gRPC and protocol buffers
  - Constructed a consistent hash ring to find the dedicated storage server (successor) for each file block
  - Implemented the Raft consensus algorithm to achieve **fault-tolerance**, providing service under minority servers down

File Backup System | *C/C++, Qt Creator, Linux, pthreads* | GitHub Link   **Aug. 2021 – Sep. 2021**
  - A C/S architecture file backup application with client GUI (Qt) for Linux, released as an AppImage
  - Monitored file system with inotify APIs to achieve **backup-on-save**, managed listening threads with pthread library
  - Led a group of 3, delivered an oral presentation and defense

Technical Skills

Languages: Python (5 yrs.), C/C++ (5 yrs.), Java (2 yrs.), Go (1 yr.), Rust (1 yr.)
Developer Tools: VS Code, PyCharm, Vim, Tabby (SSH Terminal, Port Forwarding)
Technologies/Frameworks: PyTorch, LaTeX, Linux, Git, MPI, CUDA C, Qt

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)