

# Yeqing Yang

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## EDUCATION

### Beijing Jiaotong University

Master of Science in Computer Science

Beijing, China  
Aug. 2023 – Present

- Courses: Advanced Operating System: A, Advanced Database System: A, Heterogeneous Computing: A+

### Beijing University of Technology.

Bachelor of Engineering in Software Engineering (GPA: 90.81/100)

Beijing, China  
Sep. 2019 - Jul. 2023

- Honours: Beijing Outstanding Graduate Project, 2023 | BJUT Academic Outstanding Student in 2020,2021,2022
- Courses: Principles of Compiling: A, Computer Networks: A, Principles of Database System: A, Data Structures and Algorithm: A
- Prizes: 3rd Prize in IEEE Xtreme International Competition,2020  
2nd Prize in Mini Program Application Development Competition, China Collegiate Computer Contest, 2021.  
3rd Prize in "Internet+" College Students' Innovation and Entrepreneurship Competition.

## WORK EXPERIENCES

### ByteDance Ltd.

Platform Developer Intern, R&D Department

Mar. 2025 – Present

- Contributed to the development of AI-powered solutions, such as an auto-labelling system and agent platform, with the goal of increasing operational efficiency.
- **Building Agent System for Trae**(<https://www.trae.ai/>) now.

### LM Ericsson Inc.

Platform Developer Intern, R&D Department

Feb. 2024 – Jan. 2025

- Developed across entire backend system for the Integrated Sensing and Communication (ISAC) or 5G-A Platform Project, covering network packet processing in the sensing-unit and web platform development in the fusion-unit.
- **Project 1: ISAC O&M Platform. (Go)**
  - ❖ Developed observation and management (O&M) platform to efficiently manage multiple sensing and fusion servers. Employed Domain-Driven Design to create modular services for performance monitoring, configuration management, message/signal transfer, and log aggregation. Using Dig as primary dependency injection framework.
  - ❖ Leveraged ZMQ for core communication (push-pull, pub-sub), a proxy mode for external collaboration and RabbitMQ for persistent queuing. Employed a passive connection strategy on servers to precisely control incoming client connections. Developed extension and exporter of Grafana and Prometheus for comprehensive monitoring and alerting capabilities.
- **Project 2: ISAC Packet Process System. (Go and C++)**
  - ❖ Contributed to the development of a Packet Processing server that utilizes DPDK to overcome Linux networking performance bottlenecks. Designed and implemented a distributor to effectively distribute packets from Mbuf to workers across CPU cores and cluster machines, leveraging DPDK's EAL, memory pools, and ring buffers to bypass kernel interrupts and system calls.
  - ❖ Redesigned and implemented the Decoder, a crucial part of the processing pipeline for decoding binary packages. Achieved a 25% performance gain by refactoring to a concurrent, multi-threaded Go design, leveraging channels and waitgroups for optimized data flow and synchronization for a balanced CPU and memory process workflow. Enhanced memory management by minimizing list copy operations and implementing efficient disk flush strategies and others.

### Anxinsec Technology Co., Ltd.

Linux Backend Developer Intern, R&D Department

Oct. 2022 – Feb. 2023

- Possessed extensive experience in Linux System development at the kernel level, acquiring proficiency in process management (including fork, exec, and inter-process communication), pipeline utilization, hook implementation, file system modules such as inotify, and memory allocation mechanisms. Also involved using tools such as gcc, cmake, and packages like Boost.
- **Project 1: Developed 'Asset Engine' module within the Linux backend agent (C++ and Python)**
  - ❖ Responsible for the creation of local scan and storage structures for automated scanning of installed web services and npm packages using process and thread detection. Include PID and TID tracing for extensive running information. Scan results were serialized into local SQLite database and transmitted to backend server via Protocol Buffers.

## PROJECT EXPERIENCES

### Gitnss/Harness (Go)

An open source development platform for code hosting, pipelines and automation

Dec. 2024 – Present

- Enhanced my skills in Golang web development by contributing to Gitnss, a code hosting and workflow pipeline system. Participated in feature development and pull requests like API server and githook, working with: Golang, Redis, and MySQL/SQLite
- Expanded my Golang development skills by learning dependency injection with Wire, enabling organized and efficient injector and provider management. Gained experience with lock implementations to manage concurrency for in-memory and cache operations. Further enhanced skills in integrating large modules using in-program message queues with Go channels, and in implementing diverse communication methods, including TCP, HTTP, and SSE for one-way/bidirectional communication.

### Prometheus Model Context Protocol(MCP) Server (Python)

An open-source model context protocol server provide capability for LLMs

Dec. 2024 – Present

- Addressing the challenge of connecting LLMs to external data, especially in formats like Prometheus metrics, developed a custom MCP server (in line with Anthropic's open platform initiative) for LLMs like Claude. This server facilitates efficient data and log retrieval, empowering LLMs with richer context for analysis and decision-making.
- Designed and implemented a server leveraging asynchronous, multi-threaded programming to facilitate connections to local Prometheus databases. The server exposes an API optimized for LLM integration, enabling data retrieval via query-based requests.

**Proto-MSN: A Prototype-based Medical Image Segmentation Network (Python)**

*An plug-and-play Prototype-based Segmentation Network*

*Aug. 2024 – Jan. 2025*

- Design and developed Proto-MSN, a medical segmentation model based on Prototype Learning and Metric Learning. Key contributions include a Boundary Prototype Learning (BPL) module for accurate boundary segmentation and a Prototype ReFinining (PRF) module to mitigate intra-class variance. Achieved a 4% average improvement in segmentation accuracy for orthopaedic and tumor images compared to conventional CNN- and Transformer-based methods.
- Proto-MSN is designed as a plug-and-play module for integration into various mainstream networks and backbones. Open-sourced for broader utilization, this project is currently under review in IEEE Transactions on Circuits and Systems for Video Technology.

**SKILLS & HOBBIES**

- Programming Languages: Golang, Python, C/C++, Java, JavaScript, HTML/CSS, Bash, SQL
- Tools and Frameworks: Git, Django, Docker, LATEX
- Language Skills: Native in Mandarin, Proficient in English(C1) (**IELTS 7.5** | **GRE 325**), French(A2)
- Hobbies: Photography, Video shooting and editing, Tennis, Badminton, LEGO Building, Blogging.