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A Brief Statement of Purpose:

I am actively seeking summer research opportunities for 2025, with a focus on distributed computing and its applications to large language models (LLMs) . With the appearence of ChatGPT, I firmly believe that distributed and parallel computing technologies will be instrumental in advancing LLM scalability and accessibility. This belief has shaped my research direction and technical focus.

My current research interest lies in applying LLM technology in both personal and commercial domains, particularly as more users seek to leverage their own pre-trained models. I have a solid foundation in operating systems and network infrastructure. I've set up a VPN network that connects my remote Linux server (EC2 instance as server and physical device as client, both in China) to my local machine (Sydney) .

In terms of practical experience, I have deployed an Llama 3:8b model on a remote Linux server, and I developed a private LLM-driven model powered by the GEMINI-API to assist a U.S. startup in automatically filtering contracts in specific scenarios. I am confident that these experiences, along with my technical skills in Linux and LLM deployment, can contribute to overcoming challenges in distributed computing and LLM optimization in your research group.

Education Background

University of Sydney **07/2024 - TBD**
Master of Computer Science (Advanced)
Note: It's my first semaster of master. As an advanced pathway student, I choose two specializations: Distributed System(Advanced Network Technology, Mobile Computing) and Artifical Intellegence(Principle of Data Science, Data Mining and Machine Learning).

Nanjing University of Information Science and Technology, China **09/2022-06/2024**
Bachelor of Engineering in Computer Science and Technology (Second Bachelor's Degree)
Accumulate Grade: 89.26/100
Awards: First-Class Scholarship(Twice) 、Honor Graduate、Merit Student
Highlights: *Algorithm Design and Analysis(99), Computer Organization and Architecture(99) , Computer Interface Technology(98), Data Structure(96), Introduction to Neural Network(95), Discrete Mathematics(93), Database System Principles(93), Computer Network(90), Operating System(87)*

Chongqing University, China **09/2017-06/2021**
Bachelor of Engineering in Building Environment and Energy Application Engineering
Awards: Best National Research Program in CQU
Highlights: *Data Science(86)*
Structure modal identification based on computer vision technology (First Author,EI index)
Published in Vibroengineering PROCEDIA Volume 37, 2021, p. 72-77

Research Experiences & Projects:

GEMINI-Based Contract Summarization and Filtering System **07/2024-09/2024**

I developed a contract filtering system utilizing GEMINI, focused on streamlining the process of contract analysis and summarization. The system implements a data pipeline that processes scraped contract data, passes it through the GEMINI API to filter relevant content, and generates summaries with key information. The extracted details are then organized into structured tables for easy review and filtering.

Llama3-based News Recommendation and RAG System **07/2024-08/2024**

I developed a news recommendation and RAG system leveraging NLP techniques and the Llama model. The system operates by first scraping news articles from the web, then using NLP-based embeddings to extract key features and generate summaries. Users can either receive personalized news recommendations based on these embeddings or interact with the system through queries. The RAG system integrates real-time news data and NLP techniques to provide contextually relevant responses and recommendations.

Public EC based OpenVPN(systemctl & iptable & ufw & docker) **06/2024-07/2024**

Implemented an OpenVPN server on a public Elastic Compute (EC) instance to establish a secure tunnel, connecting a private physical server at home (without public internet access) and my laptop. Configured DHCP and gateway settings to allow home devices to use the server as a soft routing proxy for internet access. Additionally, my laptop in Sydney can securely access my server located in Chongqing via the VPN tunnel. I also configured SSH with specific routes in the SSH config file to ensure traffic passes through the public server before reaching my internal network.

Food Delivery System(Nginx & Springboot & Redis & Mysql & docker) **09/2023-06/2024**

This is the undergraduate project for my second bachelor degree.It's being deployed on the cloud. The system supports a concurrency level (QPS) of around 500, meeting the business requirements under high concurrency scenarios. I utilize Java multi-threads and MySQL pessimistic lock to effectively manage concurrent operations.

MIT 6.S081 (Operating System Course Lab) **02/2023-06/2023**

I'm familiar with system calls:(such as fork, sleep, close, pipe, find,xrags,etc.). I achieve the process of creating, synchronous execution and communication pipeline establishment.I learn the concurrent programming by synchronization and state management.

Structure modal identification based on computer vision technology(Python) **05/2020-05/2021**

As teamleader, I'm responsible for data analysis and algorithm design, utilized Python for data preprocessing and analysis, and employed target detection algorithms such as Optical Flow. Responsible for background research for the paper, defining the research direction.

SKILLS:

- Programming Languages: C、C++、Python、Java、Rust
- Tool and Platform: Docker、Ollama、Git、Linux
- IELTS Scores: 6.5(Listening: 7 Reading: 6.5 Speaking: 6 Writing: 6)
- I have practical experience and theoretical knowledge in building and prompting LLM by API.
- I have practical experience and theoretical knowledge in building and tuning neural networks using the Python language and the PyTorch framework.
- I have been closely following the academic and industrial advancements in the fields of cyber security and software engineering.

Awards & Honors:

05/2020-05/2021 Best National Research Program in CQU

09/2022-08/2023 First Class Scholarship of NUIST、Merit Student

09/2023-06/2024 First Class Scholarship of NUIST、Merit Student 、Honor Graduate