Chi Xing

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Education

University of Edinburgh

Edinburgh, UK

M.Sc Artificial Intelligence

2024/09 - 2025/09

- Focused on various machine learning frameworks, ranging from basic neural networks to advanced modern architectures (Transformers, Diffusion Models, VAR, etc.)
- Dissertation is working on global-scale carbon-aware scheduling for distributed deep learning training workloads. This project is supervised by <u>Prof. Luo Mai</u>.

University of Liverpool & Xi'an Jiaotong-Liverpool University

Liverpool, UK

B.Sc Computer Science (1st class with honors)

2020/09 - 2024/07

- $\bullet \ \ Research\ Interest\ Points:\ Algorithm\ Design,\ C++/C/C\#,\ Machine\ Learning,\ Trustworthy\ AI,\ Java,\ Web\ Development.$
- Thesis is focused on scheduling algorithms for modern smart grid. This project is supervised by Prof. Prudence Wong.

Open Source Projects

ServerlessLLM

500+ Stars on Github

Core Contributor, Reviewer

2024/11 - Present

- Support ServerlessLLM deployment on **SLURM-based HPC**
- Architected an **end-to-end serverless fine-tuning solution** to provide on-demand, cost-effective model customization within the ServerlessLLM ecosystem.
- Developed a **multi-tenant serverless serving solution for LoRA adapters**, achieving up to 4.4x faster loading speeds than safetensors by leveraging the multi-layer checkpoint loading mechanism.

Casibase 3.8k+ Stars on Github

Core Contributor, Reviewer

2024/01 - 2024/09

- Expanded Casibase's capabilities by integrating support for various LLMs, including open-source and commercial models for chat and embedding tasks.
- Optimized text splitting logic (RAG workflow) to improve vectorized embedding for the knowledge base.
- Full-stack developement: backend services in BeeGo and frontend interfaces in React.js, applying the MVC design pattern to ensure loose coupling and maintainable code. Also enhanced Casibase with multimodal support.
- **Developed an instant messaging system** for multi-agent functionality.

Work Experience

N8 CIR

Liverpool & York, UK

Research Intern@Computational Biology Facility

2024/06 - 2024/09

- Focused on benchmarking various LLMs for reading biomedical literature, utilizing Llama.cpp to quantize open-source models such as Llama3.1-70B, Llama3.1-405B, DBRX, and Mixtral-8x22B.
- **Developed an objective scoring system** that extracts key information from model outputs and evaluates their similarity to manually extracted data for performance benchmarking.
- Designed a summarization method to reduce input size, enabling the use of models with smaller context windows.
- This work also involved comparing model performance across different hardware platforms, including NVIDIA GH200, A100, and CPU/GPU references, and deploying LLMs on high-performance computing (HPC) architectures.

 IFLYTEK
 Suzhou, China

 SDE@R&D
 2022/06 - 2022/09

• Enhanced the accuracy of location-based NLP tasks within the IFLYTEK "Police Super Brain" system by **conducting meticulous data annotation** and quality assurance, **correcting machine-labeled address POIs**, and applying foundational knowledge of **entity relationship extraction**.

Publication

Preference Alignment on Diffusion Model: A Comprehensive Survey for Image Generation and Editing

Feb, 2025

• Preference Alignment on DMs Application section, investigated and summarised a set of application paradigms.