



Yin Zhenshuai

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Education

Sep 2021 - Jun 2025

Northeastern University

Computer Science and Technology (Bachelor)

GPA: 3.87/5(Top 20% of majors)

Main Courses: C++ Programming (98), Java Programming (94), Assembly Language Programming (91), Data Structures (99), Discrete Mathematics (94), Compiler Principles (96) and so on

Honors and Awards: Comprehensive Scholarship, Innovation and Entrepreneurship Scholarship, Outstanding Student Award

Research Experience

May 2023 - Present

Federated knowledge distillation paper

Main Contributor

- **Project Content:** Optimized the federated learning process to enhance accuracy and minimize additional communication costs. Proposed Feature Federated Distillation (FFD) and utilized reinforcement learning for **feature selection**.
- **Responsibilities:** Collaborated with alumni mentors to develop innovative concepts and independently executed the coding implementation. Applied a **weighted attention mechanism** to adjust weights, employed the **Actor-Critic algorithm** for mid-layer selection, and visualized the results using matplotlib.
- **Current Results:** The paper is expected to be completed within one month.

Jan 2024 - Feb 2024

Research on Housing Insurance and Sustainable Community Protection in the context of disaster surge

Core Member

- **Project Content:** Developed a catastrophe insurance underwriting decision-making model for insurance companies to accurately assess the cultural value of community properties and determine specific, appropriate conservation measures.
- **Responsibilities:**
 - Utilized an **improved Poisson distribution** to predict regional disaster frequency and established a CRITIC evaluation system to measure regional loss scales.
 - Developed a catastrophe insurance decision matrix based on the ALARP principle.
 - Applied the **Logistics model** to forecast regional population changes and used the **ANN algorithm** to fit relevant variables, determining the regional risk level over a 10-year period.
 - Employed a comprehensive **AHP-fuzzy evaluation method** to assess the cultural value of buildings.
 - Established a multi-objective planning model to determine building protection measures over the next 10 years.
- **Current Results:** Awarded **Meritorious Winner** in the Interdisciplinary Contest in Modeling.

Project Experience

Oct 2023 - Jan 2024

Large language model of electricity

Team Leader

- **Project Content:** Used **ChatGLM2-6B** as the base model, pre-trained and fine-tuned it with **LLama_Factory**, and constructed a knowledge base with **Langchain** to enhance professional knowledge capabilities.
- **Responsibilities:** **Pre-trained** and **fine-tuned** the model with books and datasets provided by team members, adjusted hyperparameters, **modified Langchain source code** to fit the project, and selected the final vector library and embedding methods.
- **Current Results:** Won the **national third prize** in the Global Campus AI Algorithm Elite Competition.

Mar 2024 - Present

A TCM healthcare assistant: TCMGPT

Team Leader

- **Project Content:** The project offers **multi-round consultations**, **voice interactions**, and **image production**. It leverages **LLama_factory** for LoRA fine-tuning and **RAG** to enhance QA capabilities for long texts. Additionally, it utilizes Playground v2.5 models for image generation.
- **Responsibilities:** Using Ollama to build the model locally, employing **LLama_factory** for model instruction tuning, modifying the **embedding model** of RAG to improve effectiveness, and creating prompts following the **COSTAR** framework, which can standardize the LLM output.
- **Current Results:** Won the provincial second prize in the China University Student Computer Design Competition.

Competition Experience

Jan 2024 - Feb 2024

Interdisciplinary Contest in Modeling

Meritorious Winner award

Jul 2023 - Aug 2023

RAICOM Robot Developer Competition

National Second Prize

Apr 2023 - Jun 2023

LanQiao Cup C/C++ Programming Track

National Third Prize

Oct 2023 - Jan 2024

Global Campus AI Algorithm Elite Competition

National Third Prize