

# Xiyuan Yang

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## EDUCATION

Wuhan University, Wuhan, China

Sep 2021 - Jun 2025 (Expected)

Bachelor of Computer Science

- **Average score:** 89.2/100.0, **GPA:** 3.77/4.00
- **Research area:** Trustworthy Machine Learning (Federated Learning, Differential Privacy), Large Language Models
- **Core courses:** *Higher Mathematics, Linear algebra, C Language Programming, Data Structure, Probability and Statistics, Discrete mathematics, Operating Systems, Database Systems, Principle of Computer Organization, Computer Architecture, Computer Networks*
- **Honor's program:** Outstanding Engineer Class (Elite Class) Sep 2021 - Jun 2025

## PUBLICATION

- [1] **Xiyuan Yang**, et al. "Differentially Private Clustered Federated Learning with Rebalancing". In submission of **ICLR 2025**. (First Author)
- [2] **Xiyuan Yang**, Wenke Huang, Mang Ye. "[FedAS: Bridging Inconsistency in Personalized Federated Learning](#)". Accepted by **CVPR 2024**. (First Author)
- [3] **Xiyuan Yang**, Wenke Huang, Mang Ye. "[Dynamic Personalized Federated Learning with Adaptive Differential Privacy](#)". Accepted by **NeurIPS 2023**. (Co-first Author)
- [4] Xiuwen Fang, Mang Ye, **Xiyuan Yang**. "[Robust Heterogeneous Federated Learning under Data Corruption](#)". Accepted by **ICCV 2023**. (Third Author)

## RESEARCH EXPERIENCE

Research Intern In **Microsoft Research Asia**, Social Computing Group

Beijing, China

Supervised by Principal Researcher Fangzhao Wu

Jul 2024 - Now

- [On going] Research on generalization, security and social applications of Large Language Models.

Research Intern In **University of Chicago**

Remote

Supervised by Prof. Tian Li

Feb 2024 - Sep 2024

- Research on Clustering algorithm in Federated Learning under Differential Privacy. [1]

Research Student In **Wuhan University**, MARS Group

Wuhan, China

Supervised by Prof. Mang Ye

Sep 2022 - Jan 2024

- Research on Personalization and Robustness of Federated Learning with privacy concerns. [2, 3, 4]

## SERVICE & ACTIVITY

Reviewer of Top Conf: CVPR and SCI Q1 Journals: Inf Fushion, IEEE TKDE, CAAI TRIT

2024

IEEE Student Member

2023 - 2024

Vice Minister of the Technology Department, Microsoft Student Club of WHU

2022 - 2024

## SCHOLARSHIP

Overseas exchange and study scholarship of Wuhan University

2024

LeiJun Computer Research Funding Scholarship

2024

## COMPETITION

[MIND News Recommendation Competition](#) (Rank 1)

May 2024

- We incorporate pretrained LMs as the news encoder and user encoder, and achieved SOTA performance.

## PROJECT EXPERIENCE

**Chatbot Design Based on LLaMA-33B**

Jun 2023

- Fine-tuned the pre-trained LLaMA model on open-source Chinese corpus to improve its ability in Chinese conversations.
- Used QLoRA technology (including NF4 Quantization, LoRA, and Paged Optimizer) to greatly reduce Video Memory usage, enabling fine-tuning on a single 3090.
- Utilized vue.js for UI design to create a user-friendly interaction interface.
- Employed Django in the back-end to build logic and databases, providing a stable and efficient request processing mechanism.

**CPU Design for RISC-V Instruction Set (Course Project)**

Mar 2023

- Used Verilog language to design and implement a five-stage pipeline CPU, including IF/ID/EX/MEM/WB stages.
- Designed and implemented forwarding, stall, and other mechanisms to handle data hazards, ensuring correct pipeline execution.
- Implemented the decoding and execution of the RISC-V instruction set, including arithmetic, logic, load/store, branch, etc.

**FiberHome Telecommunication Technologies Co., Ltd. (Practical Training Course)**

Jul 2022

- Learned basic techniques of network communication facilities and network programming.
- Conducted basic operation and maintenance of network servers.

## SKILLS

**Languages:** Chinese (native language), English (fluent, IELTS 7.0)

**Technical:** Proficient in Python, PyTorch and other related tools for deep learning and data analysis, Skilled in C/C++; Familiar with Java, and common front-end technologies, Haskell functional programming language, and MySQL database