# Mr. Shitou ZHANG

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## **EDUCATION**

The Chinese University of Hong Kong (CUHK)

Sep. 2022 – Jun. 2023

Master of Science in Information Engineering

Wuhan University (WHU)

Sep. 2018 – Jun. 2022

Bachelor of Science in Archival Science (Information Management)

# **WORK EXPERIENCE**

Research Intern, DeepLang Technology Co. Ltd.

Mentor: Dr. Gang Chen Sep. 2023 – Present

**Duties included:** Mixture of Experts (MoE) pretraining

Technical Consultant, FiduciaEdge Technologies Co. Ltd., Hong Kong

Supervisor: Prof. John K. Zao Jul. 2023 – Aug. 2023

Duties included: Federated learning system implementation and deployment

Research Assistant, Key Laboratory of Archival Intelligent Development and Service, NAAC

Supervisor: Prof. Ping Wang

Jun. 2023 – Jul. 2023

**Duties included:** Domain-oriented LLM development and deployment

Research Assistant, Wuhan University

Supervisor: Dr. Zuchao Li

Mar. 2023 – Jun. 2023

**Duties included:** LLM pre-training

#### PROJECT EXPERIENCE

● LingoWhale Sep. 2023 – Present

**Description:** Developed LingoWhale, a series of general backbone LLMs with a focus on Chinese language processing; Achieved leading results in LLM benchmarks, including MMLU and C-eval; Open-sourced LingoWhale-8B, available on .

• BATGPT Mar. 2023 – Present

**Description:** Pre-trained BATGPT, a bilingual LLM available in various sizes: 15B, 30B, and 70B; Deployed as the foundation model of Powthink's services in production environment; Released the 15B v1.0 version for public use, available on <u>available</u>.

• ArcGPT Jun. 2023 – Sep. 2023

**Description:** Led the development of ArcGPT, a domain-specific LLM optimized for archival applications.

● FL on fECP

Jul. 2023 – Aug. 2023

Description: Re-implemented and optimized ClusterFL using Flower; Deployed on Vecow Vhub (arm-based edge AI computing platform); Integrated FL systems with fECP (Trusted Execution Environment).

## **PUBLICATIONS**

[1] Shitou Zhang, Ping Wang\*, Zuchao Li\*, Jingrui Hou, Qibiao Hu. "Confidence-based Syntax Encoding Network for Better Ancient Chinese Understanding". Accepted by Information Processing & Management (IPM), to appear.

- [2] Shitou Zhang, Zuchao Li, Xingshen Liu, Liming Yang, Ping Wang. "ArcMMLU: A Library and Information Science Benchmark for Large Language Models". 2311.18658.pdf (arxiv.org)
- [3] Shitou Zhang, Siyuan Peng, Ping Wang, Jingrui Hou. "Archives Meet GPT: A Pilot Study on Enhancing Archival Workflows with Large Language Models". Accepted by iConference 2024, to appear.
- [4] Shitou Zhang, Jingrui Hou, Siyuan Peng, Zuchao Li, Qibiao Hu, Ping Wang. "ArcGPT: A Large Language Model Tailored for Real-world Archival Applications". 2307.14852.pdf (arxiv.org)
- [5] Zuchao Li, Shitou Zhang, Hai Zhao\*, Yifei Yang, Dongjie Yang. "BATGPT: A Bidirectional Autoregressive Talker from Generative Pre-trained Transformer". 2307.00360.pdf (arxiv.org)
- [6] Shitou Zhang, Ping Wang\*, Zuchao Li\*, Jingrui Hou. "Enhancing Ancient Chinese Understanding with Derived Noisy Syntax Trees". Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics (Volume 4: Student Research Workshop). 2023.acl-srw.15.pdf (aclanthology.org)

## **MANUSCRIPTS**

[1] Jiajia Li, Letian Peng, Shitou Zhang, Ping Wang, Zuchao Li, Hai Zhao. "Semantics-Preserved Distortion for Personal Privacy Protection in Information Management". Expert Systems with Applications (ESWA), Under review.

Latest update on 9th Dec. 2023