JUNXI YAN

Department of Computer Science and Technology
Tsinghua University, China
+86 15840140210 | e: 2430833252@qq.com | Main Page: yanjx2021.github.io/

EDUCATION

Tsinghua University, *Undergraduate*   Beijing, China
B.S. in Computer Science and Finance   Sep. 2021 – Present
- GPA: 3.67/4.00
- Member of **THU Natural Language Processing Group**, advised by **Prof. Zhiyuan Liu.**

PUBLICATIONS

1. **Tool Learning with Foundation Models** (https://arxiv.org/pdf/2304.08354)
   Yujia Qin, Shengding Hu, Yankai Lin, ⋯ **Junxi Yan**, ⋯, Maosong Sun. ArXiv 2023.4.

RESEARCH EXPERIENCE

1. THUNLP, Tsinghua University   Beijing, China
Research Assistant to Professor **Prof. Zhiyuan Liu**   Aug. 2022 – Present
LLM-driven AI agent (XAgent):
- Released XAgent, an autonomous agent for complex task solving; Enhanced consistency, stability, and human-agent interaction; Beat GPT-4 and current pioneering projects (e.g. AutoGPT) on various math, code, QA benchmarks.
- Contributed to the code writing; Improved project's tool-server system, involving the creation and optimization of foundational tools; Designed project application scenes, established a basic test case library and evaluation rules.

Tool learning with foundation models:
- Formulated a tool learning framework: from understanding user instructions, foundation models learn to decompose complex tasks, adjust plans through reasoning, and conquer sub-tasks applying appropriate tools.
- Contributed to the survey paper writing; Conducted experiments and case studies under various scenarios including image generation, speech-to-text, language translation.

Objectllama:
- Llama model with strong function calling capabilities, proficient in handling complex tasks involving the invocation of various functions, interfaces, and tools.

2. Tsinghua University (Department of Computer Science and Technology)   Beijing, China
Team member of the Software Engineering course.   Mar. 2023 – Jun. 2023
Instant messaging system(DMail):
- Built a mature instant messaging system product in the span of one semester. Explore the feasibility of deploying a personal communication system anytime, anywhere, and delved into the rules and boundaries that software engineering projects should adhere to.
- Selected the best project for the Spring 2023 Software Engineering course.

WORK EXPERIENCE

THUSAST (Student Association for Science and Technology)   Beijing, China
Executive Assistant of the Events Department   Oct. 2021 – Aug. 2023
- Assisted the chair and the head of the events department in organizing dozens of school-level science and innovation events in two years, including but not limited to the Tsinghua University Big Idea Challenge, Drone Competition, the THU Challenge Cup Academic Competition, and a software design competition in cooperation with Shaoxing local government.
- Primarily responsible for assisting with planning and event organization.

ADDITIONAL INFORMATION

Additional Professional and Extracurricular Experiences
- Member of the Basketball Representative Team of SEM (School of Economics and Management), Won the 2022 THU Ma Yuehan Cup championship, the first championship in the past 16 years.

Interests
- Tool learning and tool creation of LLM; LLM-driven AI agent, embodied AI;
- Intersection between Computer vision and robotics

Language Skills

- TOEFL 101/120 (Reading 29, Listening 28, Speaking 21, Writing 23.
- Pass the CET4 (College English Test- Band 4)
- Basic knowledge of Greek; Completed the course Greek (Second Foreign Language)

Technique Skills
- Proficient in C/C++, Python, JavaScript, Linux, Latex, Stata.
- Familiar with various neural networks and state-of-the-art deep learning techniques.
- Proficient in WORD, PPT, excel and other office software, able to arrange and process documents and other practical skills.