Jiaju Chen

Houston, TX 77030 | Jiaju.Chen@rice.edu | (713) 493-3032 | linkedin.com/in/jiajuchen13

EDUCATION

Rice University | Master of Computer Science | GPA: 3.83/4.00   Houston, Texas
Selected Coursework: Web Development, Algorithm Design and Analysis,   Aug 2024 – Present
Database Implementation

East China Normal University | B.Sc. Computer Science | GPA: 3.82/4.00   Shanghai, China
Selected Coursework: Artificial Intelligence, Data Structure, Computer Architecture,   Sep 2020 – June 2024
Object-Oriented Programming in C, Computer Vision, Natural Language Processing

SKILLS

Programming & Frameworks: Python | C | C++ | Java | SQL | JavaScript | HTML + CSS | React | Flask | PyTorch | TensorFlow
Tools & Platforms: MySQL | MongoDB | scikit-learn | Pandas | Transformers | OpenAI API | AWS | Google Cloud Platform | Git

EXPERIENCE

Human-Centered AI Lab, Northeastern University   Remote, Aug 2023 – Present
Research Assistant

- **LLM-Driven Real-Time Interactive Storytelling System with Large-Scale User Study (Under National Grant)**
  - Engineered an interactive storytelling system powered by **OpenAI's real-time API** and **Retrieval-Augmented Generation (RAG)** using **React (frontend)** and **Flask (backend)**.
  - Conducted a large-scale **user study** with **500+ families**, analyzing engagement metrics and iterating on improvements.
- **StoryMate: LLM-Powered Personalized Interactive Story Reading System with RAG (CHI 2025)**
  - Developed StoryMate, an AI-powered **full-stack web application**, using **Flask, JavaScript, and RAG-based LLM**.
  - Designed and prototyped the **UI/UX in Figma**, ensuring an intuitive and engaging experience for users.
  - **Fine-tuned** a **retriever model** and **deployed GPT-4 with prompt engineering** and RAG for contextualized responses.
  - Led a **user study** with 39 stakeholders (children, parents, education experts), collecting qualitative insights.
- **Knowledge Graph (KG) Augmented Document-Grounded NLP Task with LLMs (EMNLP 2024)**
  - Designed and implemented an **annotation framework UI in Figma**, optimizing workflow for large-scale data annotation.
  - Developed a **full-stack web application** for **scalable annotation** using **Flask and JavaScript**, integrating external **Knowledge Graphs (KGs)** with a **Python-based ranking algorithm**.
  - **Constructed a large-scale dataset**, applying **data cleaning, preprocessing, and validation** to ensure **high-quality data** for downstream **NLP tasks**.
  - Conducted **large-scale QAG (Question-Answer Generation) experiments** with **7 SOTA language models** (GPT-4, Alpaca, Mistral, LLaMA 2) and **fine-tuned a T5-large model**, achieving superior performance over generic LLMs.

Shanghai BaoSight Software Co., Ltd, Robotics Research Institute   Shanghai, June 2022 - Aug 2022
Research & Development Intern

- **BaoCloud: Web-Based Intelligent Robot Management System (World Manufacturing Convention 2023)**
  - Developed and optimized the **UI** and **front-end** of **BaoCloud**, a platform managing **1,432 intelligent robots**.
  - Conducted **pre-launch testing**, designing and executing **500+ automated and manual test cases**.

PUBLICATIONS

- **Chen, J.**, Lu, Y., Zhang, S., Yao, B., et al. *StorySpark: Expert-Annotated QA Pairs with Real-World Knowledge for Children Storytelling.* Accepted at **EMNLP 2024**. arXiv:2311.09756
- **Chen, J.**, Tang, M., Lu, Y., et al. *Characterizing LLM-Empowered Personalized Story Reading and Interaction for Children: Insights From Multi-Stakeholder Perspectives.* Accepted at **CHI 2025**.
- Sun, Y., **Chen, J.**, Liu, J., Yao, B., , et al. *Exploring Parent's Needs for Children-Centered AI to Support Preschoolers' Storytelling and Reading Activities.* Accepted at **CSCW24**. arXiv:2401.13804
- Sun, Y., **Chen, J.**, Zhou, X., et al. *Live-Streaming-Based Dual-Teacher Classes for Equitable Education: Insights and Challenges From Local Teachers' Perspective in Disadvantaged Areas.* Accepted at **CHI 2025**.

HONORS AND REWARDS

- Special Scholarship **(Top 2%)** of East China Normal University   2021
- Excellent student leader **(Top 2%)** of East China Normal University   2021 & 2022