HANWEN YANG

Los Angeles | 831-334-5860 | hanwenya@usc.edu | www.linkedin.com/in/hwyang150

EDUCATION

University of Southern California   Los Angeles,CA
Master of Science, Computer Science   August 2024-Present

University of California, Santa Cruz   Santa Cruz, CA
Bachelor of Science, Computer Science & Bachelor of Art, Economic   September 2020-June 2024
Relevant Course: Intro of AI,Applied ML: Deep Learning, Advanced topic in NLP, ML in Econ
- Highest Honor in Computer Science; Dean's Award; University Honor, Cum laude

TECHNICAL SKILLS

Programming: Python, C, Pytorch, numpy, Linux, CUDA , C++, Docker, AWS, Azure

RESEARCH EXPERIENCE

Vision Question and Answer   Santa Cruz, CA
Undergraduate Research Volunteer   September 2023-February 2024
- implemented multimodal retrieval system aimed at boosting visual question answering tasks, used GPT-4-1106 to search web for real-time and knowledge based information, targeting domain-specific queries in agriculture and healthcare
- Integrated LangChain with GPT-4-1106, Bard, Gemini to combine web-based search capabilities with LLM outputs, boosting system's ability to retrieve and generate multimodal responses
- Demonstrated GPT4 1106's effectiveness in retrieving high-quality answers, thereby validating LLM's potential in specialized Q&A domains

ChatGPT3.5 Math Ability Evaluation   Santa Cruz, CA
Undergraduate Research Volunteer   April 2023-December 2023
- Collaborated with a team to design and implement prompt strategies tailored to various types of math problems, such as arithmetic, algebra, and geometry. Design different kinds of prompt to show whether it could improve GPT3.5 math ability
- Associated with team to complete data collection and co-developed a grading script, allowing GPT-3.5 Turbo to choose from multiple-choice answers or gave answer it deemed correct, , simplifying evaluation process
- Found GPT-3.5 Turbo's arithmetic performance varied, attaining 29.2% accuracy on the MATH dataset and 82% on the GSM8K dataset, with certain prompting methods resulting in little improvement

Bus Arrival Time Prediction   Santa Cruz,CA
Student   October 2023-December 2023
- Optimized predictive models using Long Short-Term Memory (LSTM) networks and Random Forest algorithms to analyze discrepancies between scheduled and actual bus arrival times at UCSC, rebuilder UCSC bus time schedule
- Managed data preprocessing tasks, such as merging datasets, removing outliers, and adding features. Fine tune both LSTM and Random Forest models to predict bus arrival times, optimizing model performance to enhance system's reliability
- Achieved a significant reduction in prediction errors, with models decreasing average error margin to approximately 0.0153 hours. improvement enhanced overall reliability of UCSC's bus scheduling system, helping to diminish delays

WORK EXPERIENCE

Baskin School of Engineering   Santa Cruz, CA
Group Tutor   September 2022-June 2024
- Conducted weekly one-on-one tutoring sessions with 10-15 students, covering courses such as Advanced Python, Deep Learning, and Introduction of AI. Most students achieved full marks on coding projects, while others revamped scores to nearly 90%
- Utilized various teaching tools, including PowerPoint slides, dynamic code animations, sample code demonstrations, and data structure visualization to explain complex concepts such as reinforcement learning, kinds of neural network
- Provided detailed feedback to TAs on frequently misunderstood concepts and most-asked questions, directly informed discussion session content, helped students increase homework grade and assignment score about 10%

Baskin School of Engineering   Santa Cruz, CA
Grader   January 2023-June 2024
- Evaluated 60 students homework, weekly report, and quiz within a one-week deadline, ensuring timely feedback and grading consistency. Maintained consistency by adhering strictly to professor grading rubric, and provided detailed feedback
- Compiled student questions weekly, organizing by topic and difficulty to assist TAs in addressing common concerns during discussion sessions. Managed regrade requests by reviewing submissions, coordinating with TAs
- Reported some grading issues such as off-mark answers, incorrect submissions, and unusual patterns in student assignment. Communicated with students to correct these issues and escalated to professors, helped 5 to10 students avoid 0 score