

Jae Young Lee

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Education

University of Illinois at Urbana Champaign

Aug 2018 - May 2024

Master of Science in Business Analytics | Gies Scholar 23/24

Bachelor of Science in Information Science | Dean's list 20/22/23

Experiences

LLM & Backend Developer | Discovery Partner Institute

Dec 2023 - Present

- Engineered a dynamic knowledge graph integrated with large language models for RAG, managing 200000+ researches and 2000+ researchers to effectively match research grants with faculty interests.
- Led the full-scale development of the web-based system, incorporating robust backend solutions to support advanced data processing and LLM functionalities.

Large Language Model Researcher | Gies College of Business

Dec 2023 - Present

- Developed and updated LLM applications: educational Text to Sql, 2 Coursera QA apps, ensuring optimal performance and up-to-date features for advanced language processing tasks with deployment to cloud.
- Developed an LLM-based application for automated grading of discussion boards on school's learning system, providing professors with a streamlined and efficient tool for evaluating student contributions

Marketing Data Analyst Intern | Hilti Korea

July - Aug 2023

- Formulated product launch strategy, validating a new product's suitability for the Korean market using Python for data visualization and prediction, complemented with hands-on market research
- Automated Excel documents using macros and functions, enhancing team efficiency by saving 6+ hour/doc

Researcher | Accessible Computing Lab | ASIS&T [DOI: 10.1002/pr2.956]

Aug - May 2022/23

- Developed a dynamic data mining program to analyze a diverse-format corpus archive spanning from Oct 31, 2004, to Nov 10, 2022, successfully extracting 56,159 emails and 8,344 threads from 806 unique users
- Implemented topic modeling and word embeddings using NLP frameworks, successfully identifying 101 distinct topics within the community, enhancing the understanding of user interactions

Projects

LLM Researcher / Solo Entry | CPRBS Sustainability Case competition

Feb 2024 - Present

- Employed LLMs and conventional classification models to assess the relevance of research articles to sustainability goals. Data were acquired via API and preprocessed using Python and Mathematica.
- Developed a knowledge graph with Python and Neo4j to visualize the interconnectedness of research topics, thereby underscoring the impact of sustainability research efforts at UIUC.
- Advanced to the final (third) stage as one of the top 6 teams in the competition.

Project Manager / ML Developer | Univar

Aug 2023 - Present

- Led a team of 8 to develop product recommendation models, employing ranking, content-based, and collaborative filtering algorithms, giving tailored product suggestions for sales agents to promote new products.

Lead LLM Developer | Data 4 Good competition

Sep - Dec 2023

- Automated the extraction of medical information from transcribed patient-doctor conversations using LangChain and LLMs models, enabling the system to accurately answer medical form questions
- Top 5 candidate for region 2 graduate division (5 regions) & Ranked 14 / 281 teams participating

Co-Founder | Lodestar Futures L.L.C.

D

Oct - May 2022/23

- Established product vision for Lodestar Futures, a unified mentorship platform designed to connect students with professionals, incorporating strategic business planning and developed lodestarfutures.com (web and mobile app)
- Secured 9 paid users and registered 28 mentors, successfully initiate the platform's operations

Skills

Languages: Python, SQL, R, JavaScript, HTML/CSS **Tools:** Tableau, Excel, AWS, Azure, SAS, Mathematica, Postman

Technology: Django, Selenium, Langchain, TensorFlow, PySpark, MongoDB, Hadoop, Neo4j, React, Git, Docker