

AKANGKSHYA PATHAK (SHE/HER)

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EDUCATION

2022-2023	NORTHWESTERN UNIVERSITY <i>Master of Science degree, Major: Artificial Intelligence, Minor: Entrepreneurship, GPA: 3.9/4.0</i> <ul style="list-style-type: none">Leadership Positions: Chief AI Officer, Capstone Project; Project Leader, AVATAR project; TA, Microsoft TEALS; Lead Researcher, Native American Constitution Project.	Evanston, IL
2018-2022	JORHAT ENGINEERING COLLEGE <i>Bachelor of Technology, Computer Science and Engineering, GPA: 3.7/4.0</i> <ul style="list-style-type: none">Leadership Position: Co-Founder of non-profit startup "The Green Box"; Head of Entrepreneurship Cell; Analytics Head and Co-founder of Finance Club; Co-Founder of Astronomy Club; Core Member of Coding Club.	Jorhat, AS

EXPERIENCE

2023-Present	NORTHWESTERN UNIVERSITY <i>Artificial Intelligence Engineer, CASMI</i> <ul style="list-style-type: none">Led the development of an AI Zoom avatar, resulting in a measurable increase in virtual engagement metrics through enhanced interactivity and efficiency.Designed and implemented a retrieval-augmented generation pipeline with vector embeddings search, streamlining information retrieval processes and enhancing the accuracy of a question-answering kiosk system.Developed a generative AI-based storytelling tool for children, focusing on interactive and educational content, which has improved engagement and learning outcomes in early education environments.	Evanston, IL
2024-Present	NORTHWESTERN UNIVERSITY <i>Machine Learning Engineer, Institute for Policy Research</i> <ul style="list-style-type: none">Developed an OCR pipeline that successfully digitizes text from images of Native American constitutions, preserving vital cultural documents for future research and access.Implemented topic modeling techniques on digitized texts to uncover and analyze patterns and influences in constitutional changes over time, enhancing the understanding of governmental impacts.Designed and deployed a question-answer bot and a teaching tool utilizing advanced AI techniques such as chunking, vector embeddings, and retrieval-augmented generation to facilitate educational outreach and interactive learning about Native American history and culture.	Evanston, IL
2023-2023	ERNST & YOUNG <i>Machine Learning Engineer, EY Parthenon</i> <ul style="list-style-type: none">Led the creation of a Large Language Model (LLM)-powered assistant, DivestIQ, enhancing analysis of both quantitative and qualitative data for EY's Sell & Separate division.Integrated specialized tools for financial statement analysis and report parsing, substantially improving data processing capabilities.Developed a strategy that saved approximately 17% of typical monthly engagement costs through advanced data management, including report generation and financial forecasting.	Chicago, IL
2023-2023	ADOBE <i>Machine Learning Engineer, Adobe Research</i> <ul style="list-style-type: none">Engineered a GPT-based data pipeline for long PDF data retrieval, significantly reducing operational costs by 20 times and slashing summary generation time by 50%, greatly optimizing workflow efficiency.Spearheaded performance enhancements in data processing, achieving an impressive reduction in average execution time to about 90 seconds, setting a new standard for operational speed.Pioneered new research avenues in prompt engineering that have led to significant advancements in cost analysis and runtime estimation, contributing valuable insights to the field of language model optimization.	San Jose, CA

ADDITIONAL INFORMATION/ACTIVITIES

- Programming: Python, Java, C++, C, JavaScript, SQL, HTML, CSS, PHP, CI/CD, Linux.
- Libraries and Frameworks: TensorFlow, PyTorch, Keras, NumPy, Pandas, Scikit-Learn, Matplotlib, Seaborn.
- Data Storage and Processing: MongoDB, MySQL, Databricks, PySpark, Amazon S3, GitHub, ChromaDB, NoSQL.
- Certifications: Deep Learning, Machine Learning, Product Management, Akuna Options, NLP, Data Analytics.
- Tools: LLM, LangChain, OpenAi, MapReduce, Spark, Vector Search, OOP, AWS, Azure, GCP, Llama, Groq, Docker.
- Honors: International Science Olympiad, International Math Olympiad.