

Ritul K. Soni

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EDUCATION

University of Illinois Urbana-Champaign

Champaign, IL

Masters of Computer Science

May 2025

Bachelor of Science in Computer Science & Economics

May 2024

Relevant Coursework: Systems of Generative AI, Applied ML, Computer Systems, Data Structures & Algorithms

EXPERIENCE

Country Financial

July 2024 – Present

Software Engineer

Remote

- Designed and deployed a **production-ready RAG chatbot** using Azure AI Search, Azure OpenAI, FastAPI, and React, including an **AI pipeline** to preprocess 5,000+ XML articles for integration
- Leveraged **Azure Vision OCR** to develop a system for automating the tagging and indexing of incoming documents, improving operational efficiency for the Document Storage Services Team
- Designed and implemented an automated testing suite for regression testing of critical business documents

Country Financial DigitalLab

August 2023 – July 2024

Software Engineer Intern

Champaign, IL

- Developed a POC RAG chatbot integrating Azure OpenAI and LangChain, enhancing real-time information retrieval from the company's Click-to-Know database
- As **Project Manager**, directed research to identify the best **Generative AI** coding assistant, focusing on security, performance, and cost, culminating in a strategic recommendation to boost Country's technology infrastructure

NYU - AI Zoning & Regulation Project

May 2024 - September 2024

Generative AI Research Assistant

Remote

- Enhanced **Retrieval Augmented Generation (RAG)** system reliability by optimizing data accuracy and efficiency, refining retrieval mechanisms to integrate high-quality information into AI responses
- Evaluated and implemented cost-effective methodologies, including asynchronous API calls and batching processes

Pathlit AI

January 2024 – April 2024

Software Engineer

Chicago, IL

- Designed and implemented **AI-driven algorithms** for backend agents, seamlessly integrating with Large Language Models (LLMs), including a versatile API agent, a robust Web Scraper, and a precise PDF Table Extractor
- Pioneered the integration of **Retrieval Augmented Generation (RAG)** with **Large Language Models (LLMs)** to streamline generative AI workflows, significantly boosting efficiency and quality of outputs

Department of Computer Science, UIUC

January 2022 – January 2024

Project Manager CS222, CS124 Honors

Champaign, IL

- Led and mentored teams of five students in semester projects using **Scrum Boards** and **Git**; enhanced communication and ensured timely delivery of deliverables, showcasing agile proficiency
- Educated students on technical topics such as **Flutter**, **React**, **APIs**, and Pygame-based game development, along with **Python** and **Jupyter Notebook** for **Machine Learning** techniques

PROJECTS

Personal Website and Blog | *NextJS Typescript Prisma*

May 2023 – Present

- Crafted a dynamic **Personal Website** using **Next.js**, showcasing an interactive blog documenting personal experiences as a first-generation student in corporate America, academia, and insights into the impact of AI

US Wage & Employment Data Visualization | *D3.js Javascript Tableau*

June 2023 – August 2023

- Visualized Bureau of Labor Statistics data with **D3.js** using Python to clean data and adjust values for inflation
- Created a **Data Visualization Narrative** on AI's impact on the job market and authored a **Research Paper**

TECHNICAL SKILLS

Advanced Languages: C++/C, Python, Java/Kotlin, Javascript/Typescript, HTML/CSS

Technologies: Git, GitHub Actions, Docker, Node.js, Microsoft Azure, GCP, AWS, Firebase, Vercel, MongoDB

Frameworks & Libraries: React/NextJS, Flutter, Flask/FastAPI, TensorFlow, PyTorch, OpenCV

Spoken Languages: English, Spanish, Hindi, Gujarati, Urdu