Prince Upadhyay

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Education

- **Beloit College** — Beloit, WI
  Bachelor of Arts in Data Science; GPA: 3.93 — *Aug 2022 – May 2025*

Skills

- **Languages**: **Proficient:** Python (3 yrs); **Intermediate:** SQL (2 yrs), R (1 yr); **Beginner:** Java (1 yr)
- **Tools & Frameworks**: AWS, GCP, Langchain, Docker, Kubernetes, TensorFlow, PyTorch, JupyterNotebook, Git, NLTK, Tableau, BERT, Hugging Face, Next.js, Groq, Supabase, VertexAI, Clerk, CrewAI, Crawl4AI

Experience

- **Digitenium** — Remote
  AI Engineer — *Nov 2024 – Present*
  - Designed and deployed production-grade AI agents using CrewAI framework, focusing on fintech automation for SMBs, with emphasis on scalability and real-time processing capabilities.
  - Engineered an intelligent Event Discovery Agent with Crawl4AI, Docker, Streamlit, and FastAPI that scrapes Luma and Eventbrite to deliver location-based event recommendations.
  - Developed a Payments Transfer Agent using Next.js, Clerk, and Groq that automates high-risk payment reviews, reducing manual processing time while maintaining security compliance.
- **Beloit College IT** — Beloit, WI
  Systems Programmer Intern — *April 2023 – Present*
  - Automated user account management with Python scripts for Active Directory, Jamf, and Azure, reducing IT configuration workload by 30%.
  - Provided Tier 1 technical support for Mac, Windows, Linux, mobile devices, printers, and network infrastructure across campus.
- **Beloit College** — Beloit, WI
  Research and Teaching Assistant — *Jan 2023 – Present*
  - Research Assistant – Implemented SVM and Bayesian RNN models for climate change prediction, achieving 87% accuracy in next-day weather event prediction using pressure data and climate markers (CLs, COLs, COHs).
  - Research Assistant – Built an end-to-end NLP pipeline for comparative literature analysis of French translations, utilizing AWS Textract, ChatGPT-4, and BERT-based alignment to achieve 95% accuracy in text extraction and alignment, with findings presented at EMNLP 2024.
  - Teaching Assistant – Data Mining, Statistics I Conducted weekly review sessions and one-on-one tutoring for 30+ students, improving average grades by one level through focused problem-solving and concept reinforcement.

Projects

- **Multi-Modal Insurance Fraud Detection (MMIFD)**— Developed fraud detection system using computer vision and AI Agents for property damage analysis, securing 3rd place at Georgia Tech Hacklytics using AWS, Groq, and Next.js.
- **Mining Misconception in Math (Kaggle Competition)**— Fine-tuned Qwen-14B/32B models with LoRA, improving embedding accuracy by 15% and processing 1,600+ misconceptions to predict learning gaps in mathematics education.
- **CodeX (AI-integrated IDE)**— Built intelligent coding assistant within Judge0 IDE with real-time autocompletion and error detection, optimizing model serving via OpenRouter for enhanced responsiveness.
- **Achi Board Game**— Created advanced tic-tac-toe variant with sliding mechanics, implementing minimax algorithm in Java to create challenging AI opponent that adapts to player strategies.