Prajakta Pikale

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Portfolio | LinkedIn | GitHub

EDUCATION

Master of Computer Science | University of Illinois, Urbana-Champaign (UIUC) — Aug 2024 - Dec 2025

GPA: 3.8/ 4 | Graduate Teaching Assistant (Data Curation) — Illinois, USA

Coursework: User Interface Design, Database and Distributed Systems, Cloud Computing, Applied Machine Learning

Bachelor of Technology (Computer Engineering) | Vishwakarma Institute of Information Technology — Aug 2017 - May 2021

GPA: 9.49/ 10 — Pune, India

TECHNICAL SKILLS

Programming: C++, Python, JavaScript, TypeScript, SQL

Web & API Development: React, Next.js, Node.js, Express.js, GraphQL, RESTful APIs, Django, Three.js, HTML, Tailwind CSS

Databases & Vector Stores: MySQL, PostgreSQL, MongoDB, Neo4j, Firebase, Qdrant, ChromaDB, FAISS

AI & Data: GPT-based LLMs, Hugging Face Transformers, RAG Pipelines, Vector Search, PyArrow, Data Ingestion Pipelines

Cloud & DevOps: AWS, GCP, Docker, Kubernetes, GitHub Actions, Airflow, Git

EXPERIENCE

University of Illinois | AI Engineer Intern — June 2025 – Present

- Engineered a scalable data lake platform on a HPC cluster by building **data ingestion pipelines** for veterinary education data, **eliminating 90% of manual data refresh** tasks and achieving **99% data freshness**.
- Implemented **metadata extraction and summarization** pipelines to generate semantically rich, structured metadata (keywords & summaries), tripling **query speed** and improving **search accuracy by 40%**.
- Built a Retrieval-Augmented Generation (**RAG**) system with **fine-tuned models** on veterinary domain data for reranking, achieving **25% increase in retrieval relevance** and significantly **improving precision** for domain-specific queries.
- Developed **RESTful APIs** (FastAPI) and a Next.js interface for real-time **AI-powered Q&A chatbot**, while automating the ETL and retraining pipeline with **Airflow DAGs** to ensure reliability and seamless updates.

Expedia Group | Software Development Engineer — May 2023 – July 2024

- Developed a full-stack data analytics web platform with React-based interactive dashboards and Tableau integration, backed by Node.js REST APIs, enabling **real-time visualization of 50+ business KPIs** and **accelerating decision-making cycles**.
- Built automated and dynamic dashboards using Material-UI React Table and Highcharts, **eliminating 10+ hours of manual reporting** per week and **improving data-driven insights by 30%**.
- Designed, developed, and optimized new product features and backend APIs, ensuring **sub-100ms response times** for **real-time analytics** and improved platform stability by **reducing critical bug recurrence by 20%** with proactive debugging.
- Automated CI/CD workflows for build, test, and deployment using GitHub Actions, Jenkins, Docker, and Kubernetes, cutting release cycles from every **2 weeks to daily deployments** and improving deployment **success rates by 40%**.

Cognizant Technology Solutions | Programmer Analyst — Sep 2021 – Mar 2023

- Developed and maintained **modular React UI components** for internal web applications, enhancing **reusability** and improving **page load performance by 20%**, while streamlining user workflows.
- Implemented Redux and React Hooks for **optimized state management** and integrated GraphQL APIs, **reducing API round-trip time by 15%** and enhancing overall application performance and responsiveness.

PROJECTS

1. **Data-Driven Forecasting and Visualization of Fresh Food Demand |** Next.js, Python, MySQL, Django, ML (Link)

Built a ML-powered web app using linear regression to forecast demand, reducing inventory waste by 20% and improving supply chain efficiency via real-time dashboards.

2. **3D Web Developer Portfolio |** React, Three.js, React Three Fiber, Framer Motion, Tailwind (Link)

Created interactive and responsive 3D visualizations with GLTF models and animated components, enhancing user engagement.

3. **Quora Clone |** React, Redux, Node.js, Express.js, MongoDB (Link)

Developed a full-stack Q&A platform with OAuth2, JWT-based authentication, and CRUD APIs, replicating core Quora features.