

# Prajakta Pikale

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## EDUCATION

### University of Illinois Urbana-Champaign

Master of Computer Science | GPA: 3.9/ 4.0 | Teaching Assistant

Aug 2024 - Dec 2025

Champaign, IL, USA

### Savitribai Phule Pune University

Bachelor of Technology (Computer Science) | GPA: 9.49/ 10.0

Aug 2017 - May 2021

Pune, India

## EXPERIENCE

### University of Illinois | AI Software Engineer Intern

Jun 2025 – Aug 2025

- Developed a real-time **AI-powered Q&A chatbot** with a **Next.js** frontend and **FastAPI** backend, with automated **ETL** and retraining pipelines with **Airflow**, ensuring seamless updates and system reliability.
- Engineered a scalable **data lake** platform on HPC cluster by integrating data source **SDKs** with **Slurm** jobs and **Bash** scripts to automate **cloud data ingestion**, eliminating **90%** of manual effort and ensuring **99% data freshness**.
- Designed **metadata enrichment** pipelines with **Parquet** (columnar storage) and **SQLite** (indexing), applying **KeyBERT + BART** models for keyword extraction and summarization, improving **search accuracy by 40%** and reducing query latency.
- Trained a domain-specific Retrieval-Augmented Generation (RAG) pipeline with an **embedding model + Qdrant** for retrieval and **LLaMA 3.1 8B Instruct** for generation, boosting **retrieval accuracy by 25%** and delivering precise answers.

### Expedia Group | Software Development Engineer

May 2023 – Jul 2024

- Delivered a **full-stack** data analytics platform combining multiple business performance insights into a single system, enabling **real-time visualization of 50+ KPIs** for 200+ stakeholders and accelerating **data-driven decision-making**.
- Built interactive dashboards with **React** (Material-UI, D3.js, Highcharts, Redux) and **Node.js** REST APIs, transforming manual reports into automated views, increasing **reporting accuracy by 30%** and saving **10+ hours weekly**.
- Launched **custom dashboard** views (saved/sharable configurations) using **MongoDB** and **Express**, adopted by **400+ users**, while optimizing backend APIs for high-volume analytics with **sub-100ms latency**, improving usability and collaboration.
- Automated **CI/CD pipelines** with GitHub Actions, Jenkins, Docker, and Kubernetes to **build, test, and deploy**, cutting release cycles from **bi-weekly to daily** and improving deployment success rates by **40%**.

### Cognizant Technology Solutions | Programmer Analyst

Sep 2021 – Mar 2023

- Architected and maintained **modular React components** for enterprise applications, improving **reusability** and reducing page **load times by 20%**, while streamlining workflows for users.
- Enhanced state management** with Redux and React Hooks and integrated **GraphQL** APIs, reducing **round-trip times by 15%** and improving performance at scale.

## TECHNICAL SKILLS

**Languages:** C++ (OOP), Python, Core Java, JavaScript, TypeScript, SQL, Bash

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

**Databases & Storage:** MongoDB, MySQL, PostgreSQL, SQLite, Neo4j, Firebase, Qdrant, ChromaDB

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

**Applied AI Engineering:** GPT-based LLMs, Hugging Face Transformers, RAG Pipelines, Chatbot Development, Data Ingestion

## PROJECTS

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

Implemented a ML-powered web app using linear regression to forecast demand, reducing inventory waste by 20% and improving supply chain efficiency showing real-time visualization of data.

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

Created a portfolio website for 3D visualizations with GLTF models and animated components, enhancing user engagement.

### 3. Quora Clone | React, Redux, Node.js, Express.js, MongoDB ([Link](#))

Coded a full-stack web platform with OAuth2, JWT-based authentication, and CRUD APIs, replicating Quora features.