

KUNAL RAJPUT

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EXPERIENCE

Software Developer

June 2022 - July 2023

Persistent Systems

Pune, India

- Engineered an optimized textile automation platform by integrating React, Django, and PostgreSQL with Celery and Redis for asynchronous task processing, reducing manufacturing data processing time by 85% across 15 critical stages.
- Enhanced large-scale data computations by implementing Celery-based batch processing and PostgreSQL optimizations using Pandas, enabling efficient production metric calculations and accelerating planning cycles by 60%.
- Designed interactive visualizations using Chart.js and Tailwind CSS, integrating Django Channels for real-time updates on 20+ key production metrics, improving operational insights and achieving 95% user adoption across factory teams.

Software Developer Intern

January 2022 - June 2022

Persistent Systems

Pune, India

- Developed a cloud-hosted Workforce Management Platform for 15,000 employees using Django, Vue.js, and SQLite, deploying on AWS EC2 with an RDS database, resulting in 65% faster HR operations across the organization.
- Automated 10+ HR workflows including onboarding, attendance tracking, and payroll processing by implementing Django task automation with AWS Lambda and S3 for secure file storage, reducing manual effort by 80% and improving scalability.
- Improved deployment efficiency and reliability by integrating AWS CodePipeline for CI/CD and managing Git workflows, enabling faster feature rollouts and a significant decrease in production bugs.

EDUCATION

Master of Computer Science

August 2023 - May 2025

Illinois Institute of Technology

Coursework: Cloud Computing, Machine Learning, Natural Language Processing, Mobile App Development, Big Data.

Bachelor of Computer Engineering

August 2018 - July 2022

Savitribai Phule Pune University

Coursework: Operating Systems, Data Structures and Algorithms, Database Management, OOP, System Programming.

PROJECTS

QueryFiles (queryfiles.com)

- Launched a full-stack AI document assistant with a Vercel-hosted React + Vite frontend and Dockerized FastAPI backend, supporting 1,000+ documents and real-time OCR with 95% accuracy for scanned PDFs.
- Built and deployed a RAG system with Mistral-7B and Sentence Transformers on a Google Cloud T4 GPU VM, enabling semantic search via FAISS for upto 30MB sized documents with 98% retrieval accuracy.
- Integrated Firebase Auth, Nginx, and Google Cloud Storage for secure FAISS index/chunk storage and document uploads, achieving 100% user data isolation and handling 130+ concurrent uploads with 60% improved memory optimization.

Kiri AI - Emotion-based Voice Assistant

- Architected emotion-based voice assistant by integrating Flutter speech-to-text with Google Cloud NLP, fine-tuned BERT model, and autonomous AI agents, achieving 96% accuracy in emotional response detection and adaptive interaction.
- Boosted user engagement by leveraging NLP insights and AI agent-driven personalization to deliver dynamic text-to-speech output, significantly enhancing interaction quality and user satisfaction.

Interview Prep Platform using LangChain

- Innovated a learning platform processing 420+ questions harnessing Hugging Face vector embeddings for semantic analysis.
- Leveraged Chroma DB and RetrievalQA for retrieval and fine-tuned with Google PaLM model for 33% more creative outputs.

GitHub Repo Insights and Forecasting Tool

- Built predictive analytics tool using Docker, GCP, Python, React, and GitHub API to process 10,000+ GitHub issues, enabling trend analysis and actionable insights through ML models and dynamic visualizations.

SKILLS

Languages	Java, C, C++, C#, JavaScript, Python, Dart, Kotlin, Shell Scripting
Cloud/Database	Hadoop, Spark, AWS (EC2, S3, RDS), Docker, GCP, Elasticsearch, PostgreSQL, MongoDB, MySQL
AI/ML	LLM, Scikit-Learn, PyTorch, TensorFlow, Neural Networks, RAG Models, Regression, Classification
Data Analysis	NumPy, Pandas, Matplotlib, Seaborn, Tableau, PowerBI.