

# Kunal Ahirewal

## AI Developer | Full Stack

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🏡 Nashik

### PROFESSIONAL SUMMARY

Innovative **Full Stack AI Developer** with 5+ years of experience designing and deploying **Generative AI, LLM-based**, and **end-to-end web solutions**. Specialized in **Retrieval-Augmented Generation (RAG)**, **Agentic AI systems**, **NLP**, and **cloud-based full stack development** using **Python, FastAPI, React, Docker, and AWS**. Proven success in building intelligent chatbots, data automation tools, and AI-driven business solutions that improve efficiency and accuracy by up to **50%**. Passionate about leveraging **LangChain, LlamalIndex**, and **Vector Databases** to create scalable, production-grade AI systems.

### TECHNICAL SKILLS

**AI & ML:** RAG, Agentic AI, PEFT, Supervised/Unsupervised Learning, Deep Learning (CNN, RNN, LSTM, GRU), Transfer Learning

**NLP & LLMs:** LangChain, LlamalIndex, OpenAI API, Transformers, Word2Vec, TF-IDF, NER, OCR, Sentiment Analysis

**Languages & Frameworks:** Python, FastAPI, Flask, Django, React.js, Redux, JavaScript (ES6+), TypeScript

**Databases:** MySQL, SQL Server, VectorDB, PostgreSQL

**DevOps & Cloud:** Docker, AWS, REST APIs, GitHub Actions, CI/CD Pipelines

**Data Tools:** Pandas, NumPy, Power BI, Matplotlib, TensorFlow, PyTorch

**Development Practices:** Agile/Scrum, Jira, TDD, Microservices Architecture

**OS:** Windows, Linux

### PROFESSIONAL EXPERIENCE

Since June 2023	<ul style="list-style-type: none"><li>● AI Developer <b>Epicenter Technology</b> Mumbai<ul style="list-style-type: none"><li>○ Led design and deployment of <b>HRMS chatbot</b> using <b>LLMs (OpenAI, Llama 3)</b> integrated via <b>FastAPI</b>, improving HR query resolution efficiency by <b>50%</b>.</li><li>○ Enhanced chatbot intelligence using <b>RAG pipelines</b>, <b>LangChain agents</b>, and <b>domain adaptation</b> for personalized responses.</li><li>○ Deployed <b>Generative AI document assistant</b> with <b>agentic workflow automation</b>, reducing manual HR operations by <b>40%</b>.</li><li>○ Integrated bots with <b>Microsoft Teams, WhatsApp, and Telegram</b>, automating company-wide communication processes.</li><li>○ Implemented <b>custom fine-tuning and PEFT</b> strategies to boost LLM accuracy and reduce latency by <b>30%</b>.</li><li>○ Designed scalable backends using <b>FastAPI</b> and <b>Dockerized deployments</b> on <b>AWS EC2</b>, ensuring high availability and secure access.</li></ul></li></ul>
From April 2021 to June 2023	<ul style="list-style-type: none"><li>● Software Developer <b>Parascadd Pvt. Ltd.</b> Mumbai, MH, India<ul style="list-style-type: none"><li>○ Developed and deployed <b>data-driven dashboards</b> using <b>Django + React + Power BI</b>, improving real-time decision-making for project managers.</li><li>○ Created <b>AI-powered email classification</b> and <b>invoice extraction systems</b> using <b>OCR + NLP + NER</b>, automating document workflows.</li><li>○ Designed <b>policy extraction AI tool</b> leveraging <b>Deep Learning + Named Entity Recognition</b>, reducing manual review time by <b>70%</b>.</li><li>○ Collaborated with cross-functional teams under <b>Agile</b> methodology to enhance product scalability and user experience.</li><li>○ Built RESTful APIs and backend integrations for large-scale industrial projects in <b>Oil &amp; Gas, Infrastructure</b>, and <b>Finance</b> sectors.</li></ul></li></ul>
From June 2019 to February 2020	<ul style="list-style-type: none"><li>● Data Scientist Intern <b>Cognifront Pvt. Ltd.</b> Nashik, MH, India<ul style="list-style-type: none"><li>○ Supported predictive modeling and analytics projects using <b>Python, R</b>, and <b>Scikit-learn</b> for educational data insights.</li><li>○ Assisted in developing prototypes for data visualization and student performance prediction models.</li><li>○ Applied statistical analysis and data preprocessing to ensure model reliability and reproducibility.</li></ul></li></ul>

### PROJECTS

#### 1. Generative AI HRMS Chatbot (Langchain + LlamalIndex + FastAPI + Teams Integration)

**Objective:** Automate HR operations, employee query handling, and document generation using a Generative AI-based chatbot.

**Tech Stack:** Python, FastAPI, LangChain, LlamalIndex, OpenAI GPT-4, ChromaDB, React, Docker, Microsoft Teams API

##### Contributions:

- Designed and implemented a **Retrieval-Augmented Generation (RAG)** pipeline using **Vector Databases (Chroma)** for policy-based question answering.
- Integrated **Agentic AI layer** using LangChain agents to fetch and reason over confidential employee data securely.
- Built **document automation modules** generating payslips, letters, and policies using LLMs.
- Deployed the chatbot via **FastAPI** and integrated it with **Microsoft Teams**, enabling instant HR query responses.
- Resulted in **50% faster employee resolution time, 40% reduction in manual HR effort**, and improved internal engagement metrics.

## PROJECTS

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### 2. Asnan Healthcare Chatbot (NLP + Multi-language Support)

**Objective:** Develop a multilingual medical assistant for patient queries and appointment scheduling.

**Tech Stack:** Python, Flask, FastAPI, NLTK, Word2Vec, React, Google Translate API

**Contributions:**

- Implemented **intent classification** and **NER** to understand medical queries accurately.
- Integrated **multi-language support** (English, Hindi, Arabic) to expand accessibility by **3x**.
- Enabled real-time appointment booking via backend API integration with hospital systems.
- Deployed on **Docker** with load balancing for high availability.

### 3. Invoice & Policy Extraction System (Deep Learning + OCR + NER)

**Objective:** Automate structured data extraction from invoices and contracts.

**Tech Stack:** Python, TensorFlow, Tesseract OCR, SpaCy, Pandas

**Contributions:**

- Developed **OCR pipelines** for key field extraction (vendor, total, date, invoice no.).
- Applied **NER models** to extract clauses like indemnity and termination from policies.
- Achieved **92% accuracy** and reduced document review time by **70%** across departments.

### 4. AI-Powered Email Classification System

**Objective:** Prioritize and categorize emails automatically for faster team response.

**Tech Stack:** Python, Scikit-learn, TF-IDF, Naïve Bayes, FastAPI, Power BI

**Contributions:**

- Engineered machine learning pipeline for **text vectorization and classification**.
- Deployed REST API to integrate email insights with **Power BI dashboards**.
- Reduced SLA breaches and improved response rate by **35%**.

### 5. Analytical Dashboard Platform (Full Stack BI Solution)

**Objective:** Develop project-level dashboards for performance tracking across functions like cost, risk, and safety.

**Tech Stack:** Django, React, Power BI, SQL Server, Pandas

**Contributions:**

- Built responsive dashboards for **KPI visualization** across multiple domains.
- Automated ETL pipelines to extract and transform data from project systems.
- Enabled **real-time monitoring** and improved reporting efficiency by **45%**.

## EDUCATION

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From June 2016 to June 2019	Information Technology <b>S.N.J.B's K.B.J. College of Engineering, (Savitribai Phule Pune University)</b> Chandwad
From June 2014 to June 2016	Computer Technology <b>S.H.H.J.B.Polytechnic College (MSBTE)</b> Chandwad

## CERTIFICATION

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1. Python for Data Science.
2. Stats for Data Science.
3. Data Science Architecture.
4. Power BI Masters.
5. Mastering Generative AI with OpenAI, LangChain, and LlamaIndex.

## LANGUAGES

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English (Fluent) | Hindi (Native) | Marathi (Native)