

The Digital Double: A Deeply Elaborated Professional Profile of Kuldeep Mandal

Section 1: Core Professional Identity, Mission, and Contact

The profile belongs to **Kuldeep Mandal**, an **IT Graduate** specializing in the critical intersection of **Data Analysis** and **Full Stack Development**. This professional identity is anchored by current enrollment in a Master's in Computer Applications (MCA) program at **Amity University Jharkhand** (2024 - Present), where a robust academic foundation is maintained with a **CGPA of 7.93**. My career objective is strategically focused: to specialize in data analysis, ensuring data integrity through **SQL**, utilizing **Python** for complex analysis, and mastering **Power BI visualization**. My ultimate mission is to **synthesize academic knowledge and professional experience** to consistently translate data into actionable insights and deliver measurable, robust digital solutions. This effort is supported by experience in deploying applications via **Streamlit Cloud** and utilizing cutting-edge **Generative AI (GenAI)** frameworks like **RAG**.

For direct reference, **Kuldeep Mandal** is based in **Ranchi, Jharkhand, India**. Contact details are as follows: Email: **kuldeepmandal175514@gmail.com**, Phone: **6299689984**. Full professional context is available on GitHub (github.com/kuldeep681), LinkedIn, and the dedicated CV website: https://kuldeep681.github.io/CV_website/.

Section 2: Comprehensive Technical Skills Matrix (T-Matrix)

My T-Matrix demonstrates a command of development, data science, and cloud deployment, validated by tangible project application and training.

Development and Programming Stacks

My proficiency in **Java** is at an **Intermediate** level (Core Concepts), validated through its successful application in robust **backend logic implementation**, mastering **OOPs (Object-Oriented Programming)** principles, and effective **exception handling** within the Inventory Management System. **Python** is my primary **Development Focus**, integral to **Data Analysis workflows, AI/API integration**, and the implementation of GenAI tools like **LangChain**. I possess **Strong Foundational** skills in **HTML, CSS, and JavaScript**, essential for crafting responsive designs and understanding fundamental web architecture. Furthermore, I am actively building proficiency in **React.js** and have experience with **Node.js** and using **Git/GitHub** for professional version control.

Data Science, Database, and Analytical Tools

I possess core competency in **SQL** and **MySQL** for effective database management and complex query execution. My data science toolkit includes **Pandas** and **NumPy** for advanced **data cleaning and preprocessing**. For visualization and business intelligence, I am proficient in **Power BI**, alongside other visualization libraries like **Matplotlib, Seaborn, and Tableau**. Crucially for GenAI, I have hands-on experience utilizing a **Vector Database (ChromaDB)** for structured retrieval.

Cloud, Operational Tools, and Soft Skills

My operational knowledge extends to deployment practices via **Streamlit Cloud** and the adoption of **Serverless/Zero-Cost Architecture** using **Puter cloud** for efficient applications. I also possess working knowledge of **MS Office**. My professional aptitude is further strengthened by a set of well-developed soft skills, including **Strong Communication, Teamwork, Self Motivation, Adaptability, Analytical Reasoning, and Precision**.

Section 3: Professional Experience and Applied Learning

The experience of **Kuldeep Mandal** involves critical application of skills across the software and data domains.

Data Analytics Intern, Cognifyz Technologies (April 2025 – May 2025 | Online)

This internship focused on practical data science application. I **performed a complete customer churn analysis**, leveraging **Python** and machine learning to predict customer attrition. I then effectively **visualized key predictors** using **Matplotlib, Seaborn, and Tableau**, delivering actionable **predictive insights** that directly informed strategic planning for targeted user segments.

Summer Training, Analyze Infotech (July 2022 – September 2022 | Lucknow)

During this training, I focused on the development lifecycle and enterprise application structure. I successfully **applied core Java concepts** to implement robust backend logic and gained hands-on experience in the **Software Development Lifecycle (SDLC)**. The key deliverable was engineering an **Inventory Management System** using the **NetBeans IDE**, integrating a **MySQL database** to enable vital features like **real-time stock tracking** and sales reporting.

Section 4: High-Impact Projects and Real-World Application

The project portfolio of **Kuldeep Mandal** demonstrates an advanced grasp of both traditional enterprise solutions and modern AI architecture.

RAG-Powered Candidate Assistant

This project is a flagship demonstration of my expertise in **GenAI application development and LLMOps**. I engineered a custom RAG (Retrieval-Augmented Generation) AI Assistant using the **LangChain** framework and a **ChromaDB Vector Database** to retrieve and synthesize highly accurate, context-aware answers about my professional profile. This required me to optimize the application for response speed using high-speed **LLM APIs (Groq)** and deploy the custom interface to **Streamlit Cloud**, demonstrating **end-to-end GenAI development**. The tools used specifically include: Python, RAG, LangChain, Streamlit Cloud, Vector Databases (ChromaDB), Groq API, and GenAI/LLMs.

AI Resume Analyzer (Applicant Tracking System - ATS)

This project highlights innovation in **serverless architecture** and efficient LLM deployment. The application, built with **React and Tailwind CSS**, utilizes multiple LLM APIs (including Groq and Claude) to instantly **score and analyze uploaded resumes against specific job descriptions**, providing targeted, actionable feedback for optimization. The architecture leverages **Puter.js** for cloud and AI processing, achieving a **zero-infrastructure cost** and highly scalable deployment managed from the front-end. The tools used specifically include: React, Tailwind CSS, Puter.js, LLM APIs (Groq, Claude, etc.), and File Storage.

Inventory Management System

This showcases the development of a full-stack enterprise solution using **Java, NetBeans IDE, and MySQL**. Its functionality includes comprehensive product management, **real-time stock tracking**,

sales reporting, and secure user authentication, proving capability in small-to-medium business inventory control.

AI Voice Assistant

This desktop-based assistant utilizes **Python** and a Custom **Kivy GUI** to integrate real-time **speech recognition**, conversational AI features, and system automation for news and weather updates, highlighting expertise in **artificial intelligence application** and voice processing.

Section 5: Academic Milestones, Certifications, and Future Growth

The academic rigor of **Kuldeep Mandal** is complemented by focused self-improvement and certification. Education includes the **BCA (2020 - 2023)** and the ongoing **MCA (2024 - Present)**. Certifications secured through Udemy include the **Java Data Structures and Algorithms** course, the **Full-Stack Web Development Bootcamp**, and the **Python Bootcamp**.

To achieve my mission of continuous growth, I have outlined four strategic self-improvement areas:

1. **Advanced Data Structures and Algorithms (DSA):** Required for achieving maximum code optimization.
2. **Deeper Proficiency in React:** Specifically targeting state management techniques and advanced component architecture.
3. **Expanding Backend Framework Knowledge:** Moving beyond Core Java to master enterprise-grade frameworks such as **Spring Boot, Django, or Flask**.
4. **Mastering Deployment and DevOps Practices:** Gaining expertise in **CI/CD** pipelines and containerization using **Docker**.