Manoj Kumar Pradhan

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Education

Vellore Institute of Technology, Bhopal (IN) **Sep 2022 – Jun 2026 (Expected)**
B.Tech in Computer Science and Engineering **CGPA: 8.55/10**

Skills

Programming: Python, Kotlin, Java
Databases: PostgreSQL, SQL, MongoDB, VectorDB (Qdrant, ChromaDB)
DevOps/Cloud: AWS (EC2, Lambda, SageMaker), GCP (Cloud Run, VertexAI, CLoudSQL), Docker, CI/CD Pipelines
Monitoring: Prometheus, Grafana, ElasticSearch
Tools: FastAPI, Django REST, Streamlit, Selenium, Postman, Apache Kafka, RabbitMQ

Work Experience

Outlier AI, US (Remote) **Nov 2024 - Feb 2025**
AI Trainer

- Assisted in training **generative AI** models by creating and answering computer science-related questions.
- Evaluated and ranked **100+** AI-generated code samples weekly for **accuracy, performance,** and adherence to **best practices**.
- Contributed expertise in coding languages like Java and Python to **improve** AI performance.

Projects

TalentLens | GitHub Link **Apr 2025**
Python, RAG, ChromaDB, FastAPI, Streamlit, Web Scraping

- Designed a scalable retrieval-augmented generation (RAG) system that matches job descriptions to SHL assessments using embeddings, reducing HR decision time from **30 minutes to 6 minutes** per role.
- Integrated ChromaDB vector database with **production-grade embeddings** by using Sentence-Transformers **(all-MiniLM-L6-v2)**, achieving a great match accuracy against human expert selections.
- Separated system architecture into a FastAPI backend (deployed on Render) and Streamlit frontend (on Streamlit Cloud), enabling independent scaling that handles **200+** concurrent users with average response times under **20** seconds.

SubRedditorX | GitHub Link **Feb 2025**
Python, Streamlit, Selenium, Gemini, MongoDB

- Built an automation system using Appium and Selenium WebDriver that simulates human interaction with the Reddit platform, completing post creation in under **45 seconds** compared to **3-5** minutes manually.
- Created a configurable MongoDB schema to store interaction patterns, subreddit rules, and post templates, allowing the bot to adhere to posting guidelines across 50+ different subreddits.
- Architected the codebase using the strategy pattern with clear separation between UI (Streamlit), automation logic (Selenium), and content generation (Gemini), reducing new feature implementation time from **2 days to 4 hours.**

NexAI | GitHub Link **Nov 2024**
Python, Docker, Streamlit, Cohere API, Web Scraping

- Implemented a **multi-agent** system with specialized agents (data collector, analyzer, and synthesizer) using Cohere Embed v3 and Command R+ models, improving research comprehensiveness as compared to single-agent approaches.
- Developed custom scrapers for SEC filings, industry reports, and Kaggle datasets using BeautifulSoup and Selenium, creating a structured database of **15,000+** company insights across **8** industries.
- Containerized the application with Docker Compose using separate services for MongoDB, API backend, and Streamlit frontend, reducing deployment time by **2x** and ensuring consistent environment configuration.

Certifications

Cloud Computing (By Swayam NPTEL) | View **Apr 2024**
Computer Networking (By Coursera in collaboration with Google) | View **Dec 2023**
Interpersonal Communication Skills (By LinkedIn Learning) | View **Oct 2022**

Achievements

- **Deloitte Hacksplosion:** My team qualified for round 2 and came in **top 100 teams** out of **2500+** teams all over India .
- **DSA Progress:** Solved over **200+ problems** on Leetcode and GFG.
- **Smart India Hackathon:** Qualified the **internal college rounds** of Smart India Hackathon 2024 ; Built cloud-based ML solution during internal rounds.