Manoj Kumar Pradhan

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Education

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

Relevant Coursework: Object-Oriented Programming, Database Management Systems, Data Structures and Algorithms, Operating Systems, Computer Networks, Artificial Intelligence, Generative AI, Machine Learning, Cloud Computing, Cloud Security, Mobile Development, Software Testing, System Design

Skills

Languages: C/C++, Java, Python, Kotlin, SQL

AI & ML: Generative AI, LLM Integration, TensorFlow

Automation & Tools: Selenium, Appium, Docker, GDB Debugger, CI/CD Pipelines, FastAPI, Salesforce Apex, Streamlit, Postman

Cloud & DevOps: API Development & Deployment, REST APIs, AWS, Jenkins, GCP, Azure, Redis, Kafka, MongoDB

Soft Skills: Teamwork, Cross-functional Collaboration, Agile Workflow

Work Experience

Outlier AI, US (Remote) Nov 2024 - Current
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 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 Sentence-Transformers **(all-MiniLM-L6-v2)** to create and query assessment embeddings, achieving a great match accuracy against human expert selections.
- Engineered a BeautifulSoup-based crawler that extracts assessment descriptions from SHL's website weekly, automatically updating the knowledge base with new assessments and maintaining data freshness.
- 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 mobile app, 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.

Achievements

- **Deloitte Hacksplosion:** My team qualified for round 2 and came in **top 100 team** 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.