

# OM SHIRUDE

Open to Relocate

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## WORK EXPERIENCE

### D10x

July 2024 – July 2025

AI Engineer Intern

Pune, Maharashtra

- **Multi-Agent AI Development:** Built a multi-agent framework for a healthcare website using LangGraph, knowledge graphs, RAG, and the OpenAI API to accurately process and respond to user queries.  
*Tools: LangGraph, Neo4J, OpenAI API, Python*
- **Data Pipeline Development:** Developed Python scripts to build and manage a data pipeline, handling the automated import and management of data from diverse sources including APIs, JSON, and Excel.  
*Tools: Python, PostgreSQL, Playwright, Requests, Openpyxl, Pandas, Psycopg2*
- **Hospital Ranking System:** Engineered the hospital ranking feature using Python to process data, apply custom formulas, and write scripts that stored the final, calculated rankings into the database.  
*Tools: Python, Pandas, Scipy, PostgreSQL*
- **AI System Development:** Tasked with building an AI-powered system designed to generate both SQL queries and data visualizations directly from natural language inputs. The core objective was to enhance the efficiency of data analysis workflows.
- **Multi-Agent System Experimentation:** Developed GPT-4o Mini-based workflows with agents for query simplification, relevance detection, SQL generation, and result formatting; tested on *dvdrental* PostgreSQL via SQLAlchemy, with results logged in Excel.

### KASNET TECHNOLOGIES PVT. LTD.

Nov 2023 – Dec 2023

Data Analyst Intern

Pune, Maharashtra

- **Cloud and Data Training:** Completed intensive training focused on Microsoft certifications, covering fundamentals in Azure (AZ-900), AI (AI-900), Power Platform (PL-900), and Data (DP-900).
- **Project Application:** Applied the training by working with Azure Cloud Services and Microsoft Power BI to contribute to the projects.

## PROJECTS

### AutoViz: Automate SQL Queries and Visualizations with AI

- **Automated Pipeline:** Developed an end-to-end AI-powered pipeline to translate natural language user queries into data visualizations automatically.
- **Multi-Agent Framework:** Utilized a multi-agent framework that processes user input along with a database schema, retrieved via SQLAlchemy, to generate precise SQL payloads.
- **Seamless Visualization:** Integrated the generated SQL payloads with Apache Superset to automatically create and display charts and graphs, enabling a smooth query-to-chart workflow.
- <https://github.com/OmShirude/AutoViz>
- *Tools: Python, SQLAlchemy, Ollama, Apache Superset, HTML, CSS, WSL*

### SmartSlot: AI-Driven Delivery Scheduling System for India Post

- **AI-Powered Optimization:** Designed an AI-driven system to optimize delivery schedules for India Post, enhancing logistical efficiency.
- **Interactive Scheduling:** Enabled recipients to conveniently select or modify their preferred delivery time slots through common platforms like WhatsApp or SMS.
- **Scalable Frontend:** Built a scalable and modern user interface using Next.js and TailwindCSS, ensuring the system is a flexible and robust logistics solution.
- <https://smartslot.vercel.app>
- *Tools: Vercel, Next.js, Tailwind CSS, Twilio*

### Comparative Analysis of Machine Learning Techniques in Predicting Flight Prices

- **Predictive Modeling:** Developed and evaluated several regression models to predict airfare dynamics and uncover insights into pricing fluctuations.
- **Model Comparison:** Conducted a comparative analysis of Linear Regression, Decision Tree Regressor, and Extra Trees Regressor to determine the most effective model for the task.
- **Goal-Oriented Analysis:** The primary objective was to identify cost-effective travel solutions by understanding and forecasting flight price trends.
- [https://github.com/OmShirude/Projects/blob/main/Predicting\\_flight\\_prices.py](https://github.com/OmShirude/Projects/blob/main/Predicting_flight_prices.py)
- *Tools: Google Colab, Pandas, Matplotlib, Sklearn*

EDUCATION

Bachelor of Engineering

August 2021 – June 2025

Artificial Intelligence and Data Science Engineering

Relevant Coursework – Machine Learning, Statistics, Data Structures and Algorithms, Database Management System, Data Modelling and Visualizations, Web Technology, Internet of Things, Artificial Intelligence, Artificial Neural Networks, Distributed Computing, Pattern Recognition

ACHIEVEMENTS

- FIDE Rated Chess Player played at the zonal level.
- Won the Ensemble 2K24 Chess Tournament.
- Won Prize in Ensemble 2k25 Chess Tournament while arranging the whole event.
- Participated in SIH 2024.

CERTIFICATIONS

Artificial Intelligence (Infosys Springboard), AI for Youth Program (Intel), Microsoft Azure AI Fundamentals(AI-900), Reinforcement Learning and Deep Learning Essentials(Cognitive), Data Analysis with Python(Cognitive)

TECHNICAL SKILLS

**Programming Languages:** Python, SQL, HTML, CSS

**Technology:** LLMs, Multi Agent Frameworks, Context Engineering, Data Analytics, Supervised & Unsupervised Learning, NLP, DBMS, Data Preprocessing

**Tools:** PostgreSQL, SQLAlchemy, LangChain, LangGraph, OpenAI API, HuggingFace, Ollama, Git, VS Code, GitHub, Excel, Power BI, N8N