

## Lakshmi Manaswini Pulicharla

AI&ML Engineer|| Data Scientist|| Data Analyst

Mobile: +1 314-913-6194|| LinkedIn : [www.linkedin.com/in/lakshmi-manaswini-pulicharla](https://www.linkedin.com/in/lakshmi-manaswini-pulicharla)

Email: [plakshmi@manaswini@gmail.com](mailto:plakshmi@manaswini@gmail.com) || GitHub: <https://github.com/LakshmiManaswini-7>

Portfolio: <https://lakshmi@manaswini-7-portfolio-app.streamlit.app/> || Address: 12568 Marine Ave, Saint Louis, MO, 63146

Experienced Machine Learning Engineer skilled in developing and deploying end-to-end AI and analytics solutions. Expertise in real-time monitoring systems, SQL pipeline optimization, and predictive modeling using Scikit-learn and PyTorch. Proficient in Python, SQL, and data visualization, with strong foundations in statistical analysis, model optimization, and automation. Passionate about delivering scalable, data-driven solutions that enhance decision-making and business performance.

### TECHNICAL SKILLS

- **Programming Languages:** Python, Java, C++, C
- **Libraries & Frameworks:** NumPy, Pandas, Scikit-learn, TensorFlow, PyTorch, Keras, XGBoost, Hugging Face Transformers
- **Machine Learning:** Regression (Linear, Logistic), Decision Trees, Random Forest, Gradient Boosting, SVMs, Clustering (K-Means, DBSCAN), PCA, Time-Series Forecasting, Anomaly Detection, Reinforcement Learning
- **Deep Learning:** Neural Networks, Natural Language Processing, Computer Vision (OpenCV, PyTorch/TensorFlow)
- **AI & ML:** LLMs, Generative AI, NLP, Agentic AI Systems, Model Evaluation & Experimentation
- **Mathematics & Statistics:** Probability, Inferential statistics, Linear Algebra
- **Data Visualization:** Matplotlib, Seaborn, Power BI
- **Databases:** MySQL, SQL Server, RDBMS, Data Warehousing
- **Version Control & Collaboration:** Git, GitHub
- **Workflow & Automation:** Jupyter Notebook, Anaconda, VS Code, PyCharm
- **Cloud & Data:** Azure, AWS, GCP, Docker, Kubernetes, Data Pipelines
- **MLOps & Deployment:** Docker, Flask, CI/CD, Model Monitoring, Telemetry Tracking

### PROFESSIONAL EXPERIENCE

Learning Assistant | Southeast Missouri State University | Aug 2024 – Present Cape Girardeau, Missouri

- Conduct 1-on-1 and group tutoring sessions for Computer Science, Machine Learning, and Statistics courses.
- Assist students in applying Python for data analysis, statistical modeling, and machine learning applications.
- Guide learners through algorithm implementation, model evaluation, and performance optimization. Support understanding of probability, hypothesis testing, and data-driven decision-making.
- Collaborate with faculty to design interactive learning materials that enhance comprehension of AI and analytical concepts.

Machine Learning & Analytics Intern | Value Information Technology Solutions Pvt. Ltd. | Jan 2023- Dec 2023

- Designed and deployed real-time monitoring dashboards using Kibana, Logstash, Elastic, improving system telemetry tracking and enabling faster anomaly detection.
- Developed and maintained SQL-based data pipelines, reducing query execution time by 30% and ensuring accurate inputs for ML workflows.
- Implemented ML techniques (regression, anomaly detection) for predictive monitoring and performance optimization.
- Built automated analytics workflows in Python, cutting manual reporting time by 50% and supporting business decision-making.

- Supported the creation of scalable ML solutions and contributed to cross-functional collaboration between data science and engineering teams.

## ACADEMIC PROJECTS

---

- Built an AI-powered chatbot application using Streamlit and Mistral LLM (via Ollama) to convert natural language queries into SQL statements for CSV datasets.
- Integrated DuckDB for fast query execution and Streamlit UI for interactive result visualization, enabling users to perform data analysis without SQL knowledge.
- Ensured local execution and privacy preservation, allowing secure and efficient querying on sensitive datasets.
- Technologies: Python, Streamlit, Ollama, Mistral LLM, DuckDB, SQL

## EDUCATION

---

Master of Science: Computer and Information Sciences | December 2025

Southeast Missouri State University 3.72/4GPA

**Relevant courses:** *Python, Machine Learning, Data Analytics, Software Engineering, Cloud Computing, AI, DBMS*

---

## Licenses & Certifications

- Getting Started with Deep Learning – LinkedIn Learning (Mar 2025)
- Training Neural Networks in Python – LinkedIn Learning (Mar 2025)
- Machine Learning Specialization – DeepLearning.AI (Oct 2024 – Dec 2024)
- ChatGPT Prompt Engineering for Developers – DeepLearning.AI (Aug 2024 – Sep 2024)