

Durga Chowdary Koduru Lokesh

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SUMMARY

Versatile Data Analytics professional with expertise in Machine Learning, GenAI, and MLOps. Experienced in developing advanced AI solutions, including LLMs with RAG implementation. Skilled in cloud technologies, data visualization, and automation. Proven track record of optimizing data processes, reducing costs, and improving operational efficiency across various industries. Committed to leveraging cutting-edge technologies for impactful business solutions.

PROJECTS

MyGPT - Enterprise LLM Solution with RAG Implementation

<https://github.com/dkodurul/MyGPT>

Developed an advanced GenAI application using open-source Large Language Models (LLMs) and Retrieval-Augmented Generation (RAG) for enterprise use cases.

Key Achievements:

- Implemented secure document processing with LangChain and custom vector databases
- Built robust backend supporting multiple LLM models (GGUF)
- Designed modular components for industry-specific knowledge integration
- Integrated Ollama's Llama models for high-quality synthetic data generation
- Trying to implement RAG techniques with vector databases to enhance LLM capabilities
- Developing vector embedding pipeline for efficient semantic search
- Implemented agentic architectures using Crew AI for improved system autonomy

Impact:

- Enabled data sovereignty utilizing opensource frameworks and reduced cloud dependency for organizations
- Improved response accuracy through domain-specific knowledge integration
- Enhanced AI system performance and reliability through LLMOps expertise

CortalV2I: Open-source Python tool for efficient Audio & video frame extraction

<https://github.com/cortal-insight/cortalv2i>

- Volunteered to create a python package for handling multiple input formats including archives and YouTube links.
- Features time-interval and change-detection extraction methods, demonstrating expertise in video processing and automation.
- The modular architecture supports various output formats, enabling efficient content analysis for machine learning datasets without full video downloads.

Impact:

- Helped computer vision projects collect synthetic image data from various sources in efficient way.

SKILLS

Programming: R programming, Python, Terraform, Shell Script (Linux/UNIX), LangChain

Database: Oracle, MS-SQL, Vector Databases (pinecone)

Machine Learning: regression techniques, time series and forecasting, deep learning (ANN, CNN, RNN, LSTM)

Generative AI: Large Language Models (LLMs): Retrieval-Augmented Generation (RAG), Ollama's Llama models, Synthetic Data Generation, LLMOps, Agentic Architectures, Crew AI

Testing: Hypothesis testing, A/B testing

Visualization: Tableau, Power BI

Cloud: AWS (Lambda, EC2, RDS, ALB/NLB, S3, Glue, Code Build, EKS, ECR, EMR), Azure (Azure Dev-Ops, Azure storage services)

Integration: MLflow, DVC, DevOps, Docker, Kubernetes, Jenkins, Ansible, TensorFlow

EDUCATION

Masters in Business Analytics

2023-Present

Kent State University | Kent, Ohio, United States | GPA 3.6/4.0 | Coursework: Machine Learning, Database management, Data visualization, Data mining, Deep learning.

PROFESSIONAL EXPERIENCE

Data Analyst Intern | Kent state University | Kent, OH.

2024 – Present

- **Developed a Demand Forecasting Model:** Integrated student demographics and financial analysis to develop a revenue forecasting model for the university using **Regression** and **Time Series** Models to predict the incoming students.
- **Performed Data Transformation:** Conducted data transformation on demographics data using **R programming** from both university and external state sources to prepare it for modeling.
- **Supported Finance and Marketing Teams:** Presented our analysis to the finance team for budget preparation and the marketing team using **tableau** dashboards analytics to target lead generation by providing accurate predictions.

Systems Engineer | EPAM Systems INC | Bangalore, India.

2022-2023

- As an **MLOps Engineer**, I have played a key role in optimizing data and model management processes for a \$50 billion insurance client. Within a team of 4, highly collaborated with data science and engineering teams.
- **Streamlined Data Version Control:** Managed **2TB** of monthly data using Azure Storage Services.
- **Integrated Model Management and Deployment:** Implemented Kubernetes and Docker with **MLflow** for efficient model scaling and deployment.
- **Enhanced Monitoring and Alerting:** Set up comprehensive monitoring and alerting systems to track model performance and data drift, ensuring proactive issue resolution. These efforts reduced costs and maximized operational efficiency.

Associate Consultant | KPMG Global services | Bangalore, India.

2021-2022

- **Automated Cloud Infrastructure:** Utilized Terraform to automate the cloud infrastructure for a trillion-dollar asset management client, encompassing the entire data operations stack in **AWS**. This included services like Airflow, EMR, and EKS across development, test, and production environments.
- **Implemented CI/CD with Code Pipelines:** Established **CI/CD** pipelines in AWS, allowing for seamless deployment and management of infrastructure and code changes. This streamlined process empowered the data engineering team to efficiently turn up and turn down resources, contributing to a significant **32% reduction** in cloud computing costs.
- **Built Monitoring Dashboards:** Developed dashboards using AWS CloudWatch to monitor resource utilization.

Junior Engineer | Mindtree Ltd. | Bangalore, India.

2018-2021

- **Led Cloud Migration for Media Client:** Spearheaded the migration of a media client's on-premises infrastructure to cloud computing (**Azure**). Utilized **Ansible** for configuration management and **Jenkins** for CI/CD processes to ensure a seamless transition.
- **Migrated Code to GitHub:** Successfully migrated the entire codebase to **GitHub**, streamlining the client's SDLC process.
- **Improved Product Uptime and Reduced Costs:** Achieved a **4% increase** in product uptime and **35% reduction** in infrastructure costs.