

Venkatesh Akula

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Professional Summary

Data Engineer with 3+ years of experience in a strong background in **ETL development**, **machine learning**, and **cloud technologies**. Skilled at designing scalable data pipelines, optimizing workflows, and implementing data-driven solutions to improve operational efficiency.

Education

Master of Science in Information Technology, Kennesaw State University, USA | Jan 2024 – May 2025 | GPA: 3.6
Bachelor of Communication and Electronics Engineering, BIHER, India | May 2017 – Jun 2021 | GPA: 3.8

Technical Skills

Programming Languages: Java, Python, SQL, JavaScript, R, C, Shell Scripting

Frameworks/Tools: Apache Airflow, Spark, Hadoop, Databricks, Kafka, ETL Tools, Spring Boot, REST

Cloud Platforms: Google Cloud Platform (GCP) – Big Query, DataProc, AWS – S3, SageMaker, EMR, Azure – Data Lake, Stream Analytics

Databases: MySQL, PostgreSQL, MongoDB, Oracle DB, Snowflake, GCP Cloud SQL

Machine Learning & AI: Supervised & Unsupervised Learning, Neural Networks (CNN, RNN), TensorFlow, Scikit-learn

Data Visualization: Tableau, Power BI, R Shiny, Google Looker

Work Experience

Data Engineer

Oct 2021 – Dec 2023

Client: Wool Worthy, Tata Consultancy Services, US

- Designed and optimized large-scale **ETL pipelines** using Apache Airflow and GCP, enhancing data processing efficiency by **30%**.
- Improved **Directed Acyclic Graphs** (DAGs) to reduce processing time by **25%**, ensuring system scalability and operational reliability.
- Developed complex **SQL queries** and **stored procedures** for data extraction and aggregation.
- Architected** scalable solutions for **big data** applications, enhancing the performance of mission-critical systems.
- Developed predictive **machine learning models**, improving business outcome predictions by **20%**.
- Guided junior engineers in technical aspects, improving team productivity and technical skills.

Data Analyst

Jun 2020 – May 2021

Sutherland, Chennai, India

- Developed automated **pipelines** using **SQL and Excel**, increasing efficiency by **25%**.
- Created actionable reports and dynamic **Power BI** dashboards, improving decision-making by **30%**.
- Designed and maintained databases using **MS Access**, optimizing reporting capabilities.
- Optimized complex SQL queries and indexing strategies to improve query performance and reduce latency in large-scale data processing environments.

Key Projects

Customer Analysis Dashboard | (Skills: Tableau, Python)

[Source Code](#)

- Constructed an intuitive Customer Analysis dashboard, enabling stakeholders to easily identify growth opportunities and optimize business strategies, resulting in improved revenue and customer satisfaction.

Conversational Chatbot with Memory | (Skills: LLMs, Hugging face, Transformers, Embedding, ChatGPT, OpenAI)

- Utilized cutting-edge AI technologies, including OpenAI's GPT-3 and Hugging Face's model hub, to develop an AI application, showcasing advanced natural language processing and understanding abilities.
- Implements a conversational memory system using Lang chain's conversational buffer memory to maintain context and provide more personalized interactions.

Understanding the Impact of Invasive Species on Native Biodiversity and Ecosystem Services |
(Skills: Python, R, GIS (QGIS/ArcGIS), Machine Learning, Data Analysis, Statistical Modeling, Data Visualization (Tableau, Power BI), Big Data Integration)

- Analyzed the impact of invasive species on biodiversity using large-scale datasets, GIS mapping, and machine learning models.
- Developed data-driven conservation strategies by correlating species spread with environmental and socioeconomic factors.

Certifications

Google Cloud Certified: Associate Cloud Engineer
Microsoft Certified: Power BI Data Analyst Associate

(Certification ID: N3mwvq)
(Certification ID: 995534758)