

Vikas Reddy

Data & Analytics Engineer | End-to-End ETL Solutions & BI Dashboards

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EXPERIENCE

Brain-Machine Interface Lab at UMBC

Baltimore, USA

ML Researcher, Deep Learning and Signal Processing

Jan. 2024 – Present

- Extracted, cleaned, and analyzed multi-modal data (EEG and facial features) to drive ML model development, achieving 97% accuracy and providing actionable insights via custom dashboards.
- Implemented scalable architectures using transformers and ConvLSTM, integrating data visualization techniques to reveal complex signal patterns and performance trends.
- Collaborated with interdisciplinary teams to refine key performance metrics and ensure data extraction processes met compliance and timeliness requirements.
- Authored a standardized data collection protocol that improved dataset quality and supported subsequent ad hoc analysis and special projects.

Epam Systems

Hyderabad, India

Intern, Software Development Engineer in Test

Jan. 2023 – June 2023

- Developed automation scripts and backend services using Python, SQL, and Java to streamline data validation and extraction, reducing deployment failures by 30%.
- Constructed CI/CD pipelines with Jenkins, Git, and Docker while leveraging AWS and Hadoop, optimizing cloud-based data processing and performance tracking.
- Enhanced data distribution workflows to support rigorous reporting requirements, ensuring compliance with contractual obligations and system reliability.
- Collaborated across departments to translate business needs into data-driven solutions, aligning technical approaches with analytical best practices.

IndicWiki Project

Hyderabad, India

Intern, Data Analyst

Mar. 2022 – June 2022

- Designed and executed a scalable data pipeline using Python and SQL to extract and preprocess 10,000+ multilingual articles with 98% data accuracy.
- Developed interactive dashboards using Tableau and Matplotlib, visualizing key performance and translation metrics to support strategic insights.
- Streamlined data extraction and reporting to ensure timely distribution and compliance. Documented workflows that reduced onboarding time by 40% and supported effective ad hoc analysis.

PROJECTS

LinkedIn Referral Automation Using Selenium | *Python, Selenium*

GitHub

- Built a scalable automation tool using Python and Selenium to streamline LinkedIn referral requests with personalized messaging, reducing manual effort by 80%.
- Integrated with LinkedIn UI to simulate human-like behavior, ensuring reliable outreach cycles and consistent follow-ups for networking efficiency.

Lexically Constrained Beam Search for Machine Translation | *Python, PyTorch, Hugging Face*

GitHub

- Implemented lexically constrained beam search from scratch to guide LLM outputs with domain-specific vocabulary, enhancing accuracy and translation control.
- Fine-tuned LLMs on TR-EN WMT datasets; validated performance with 300+ test cases and BLEU metrics, showing measurable quality improvements.

TECHNICAL SKILLS

Languages: Python, Java, SQL, R, C/C++, HTML, CSS, TypeScript, JavaScript, JSON, XML

Frameworks: TensorFlow, PyTorch, Keras, Flask, FastAPI, PySpark, Hugging Face Transformers, LangChain, CrewAI

Developer Tools: Docker, Kubernetes, Jenkins, Git, AWS, VS Code, JIRA, Tableau, Power BI

Libraries: NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn, OpenCV, Transformers, Selenium, TestNG

Others: Data Structures, NLP LLMs, CI/CD, Automated Testing, Design Patterns, SOLID, Agile (Scrum/Kanban)

EDUCATION

University of Maryland Baltimore County (UMBC)

Baltimore, MD

Master's in Data Science; GPA: 4.0

Aug. 2023 – May 2025

Institute of Aeronautical Engineering (IARE)

Hyderabad, India

Bachelor's of Technology in Computer Science and Engineering; GPA: 3.41

May 2019 – May 2023