Dhanush Garikapati

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EDUCATION

University of Maryland - College Park, MD,USA – M.S. in Data Science, GPA: 4.0   **August 2024 - May 2026**
Vellore Institute of Technology, AP, India – B.S. in Computer Science, GPA: 3.48   **August 2020 - May 2024**

EXPERIENCE

Data Analytics & GIS Intern – Maryland Transportation Authority, MD, USA   **June 2025–August 2025**
- Performed data analysis on spatial asset data and contributed to building a criticality framework to identify and prioritize the facilities that need attention among the **87** facilities owned by mdta.
- Assisted with QA/QC of GIS data related to ITS and Electric assets at **8** major toll facilities.
- Created dashboards and documentation to support engineering decisions and infrastructure planning.

Graduate Student Assistant – Facilities Management UMD   **Jan 2025–June 2025**
- Managed front desk responsibilities in the mail & service department, such as data entry, and organizing mailroom logistics. Developed attention to detail, organization, and teamwork in a professional setting.

Web Developer Intern – iBaseIT, India   **January 2024–May 2024**
- Collaborated with senior developers on front-end tasks applying HTML, CSS, JavaScript, and Bootstrap to enhance user interfaces for internal tools and client websites.
- Learned agile development practices and participated in code reviews, and testing.

PROJECTS

Employee Attrition Prediction with LIME   **2025**
Performed exploratory data analysis (EDA) on IBM HR Analytics dataset to uncover attrition patterns. Engineered features from pay, age and demographics, then trained Gradient Boosting models (XGBoost, LightGBM). Applied LIME to interpret predictions, identifying key drivers like education background and job satisfaction. Generated actionable insights.
Skills: Python, Scikit-learn, XGBoost, LIME, Feature Engineering.

RAG for Document Q&A   **2025**
Developed an LLM-powered chatbot for querying uploaded documents (PDF, DOCX, TXT). Extracted text with PyPDFLoader and docx2txt, chunked using RecursiveCharacterTextSplitter. Generated embeddings with SentenceTransformer (all-MiniLM-L6-v2) and stored in Pinecone. Integrated Google's Gemini 2.0 Flash model for fast, context-aware responses, with summarization and fallback for irrelevant queries.
Skills: Python, LangChain, Pinecone, SentenceTransformers, Gemini 2.0 Flash, RAG, Semantic Search.

Visualizing Bike Share Usage Patterns   **2024**
Analyzed open bike share data to explore usage trends by time of day, season, and location. In Python, cleaned and summarized data, then plotted key patterns using bar charts and heatmaps. Concluded with insights to improve bike station placement.
Skills: Python, GIS, Excel, Data Cleaning, Visualization (Matplotlib & Seaborn Libraries)

Brain Tumor Classification Using CNN   **2024**
Built a deep learning model with Convolutional Neural Networks (CNNs) to classify MRI images into tumor vs. non-tumor. Used Keras with TensorFlow and performed preprocessing, data augmentation, and evaluation
Skills: Python, CNN, Keras, TensorFlow, Image Processing, Medical Imaging

SKILLS

Languages: Python, Java, R, SQL
Tools: Microsoft Office Suite, Google Sheets, Power BI, Tableau
Databases & Data Processing: MySQL, PostgreSQL, MongoDB, Apache Airflow, Spark, ETL Pipelines
ML Libraries: Pandas, NumPy, Matplotlib, Seaborn, plotly, Scikit-learn, TensorFlow, Keras, OpenCV, GeoPandas
Techniques: Data Cleaning, Spatial Analysis, Data Visualization, Time Series Forecasting
Soft Skills: Research Experience, Problem-Solving, Critical Thinking
Languages: English, French (Basic), Hindi, Telugu

CERTIFICATIONS

- Artificial Intelligence — SmartBridge Externship
- Data Analytics & Visualization — Accenture

LEADERSHIP & INVOLVEMENT

Volunteer – Computer Science Career Fair @ UMD
- Assisted with employer check-ins, guided students, smooth setup of recruiter booths. Demonstrated communication, event management, coordination, problem solving.

Lead Member – NextGen Student Club (ML and Cloud Computing)   **2022 – 2024**
- Assisted fellow students by troubleshooting code, explaining key ML concepts, and sharing resources.

PROFESSIONAL REFERENCES

Yousre Odeh - DATA & GIS Analyst, MDTA