SURYA SAI MAHESWAR BUDIDI
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EDUCATION

University of Alabama at Birmingham — **Birmingham, USA**
Masters in Computer Science | GPA: 3.8 / 4.0 — Jan 2024 - Dec 2025
Course Work: Data Structures, Database Systems, Machine Learning, Deep Learning, Data Mining, Data Science, Probability & Statistics

Jawaharlal Nehru Technological University — **Kakinada, India**
Bachelors in Computer Engineering | GPA: 8.82 / 10.0 — June 2018 - June 2022

EXPERIENCE

University of Alabama at Birmingham — **Birmingham, USA**
Graduate Assistant (Digitalization and Digital Services Lab) — April 2024 - Present

- Designed metadata creation pipelines for 7000+ fragile historical records, ensuring digital preservation facilitating technical research.
- Automated digital preservation workflows using Python, increasing accessibility of digital assets and improving archival efficiency.

HCLTech Limited — **Hyderabad, India**
Software Engineer **(**Client: Verizon AI & Data) — Aug 2022 - Dec 2023

- Optimized AI-driven solutions for Verizon's FWA project, contributing to **$550M+ revenue** and supporting **4.2M+** customer base.
- Engineered PySpark ETL pipeline to migrate **20M+ records** from Teradata to GCP BigQuery, reducing ingestion time by 35%.
- Implemented GCP Dataproc notebooks using PySpark & Spark SQL, transforming 20M+ records from Raw to Curated zones.
- Transformed SQL pipelines into Spark RDDs and Python Scripts, cutting processing time by 40% and improving throughput.
- Led schema validation for **200+ tables** during Teradata-to-GCP migrations, ensuring 99% data integrity across target Databases.
- Mapped 200+ BTEQ scripts with 500+ columns, ensuring data modeling schema transformations between source and target DBs, which improved data accuracy and consistency.

Software Engineer Intern — Jan 2022 - June 2022

- Completed 80+ hands-on Python and SQL projects, developing robust scripts for automation and data processing workflow.
- Designed a hospital management system using Python, Tkinter, and SQLite, ranked **2nd out of 60 interns** for project functionality.
- Deployed **8 PySpark ETL pipelines** on GCP Dataproc, extracting data from GCS, transforming datasets in Dataproc notebooks, and loading processed data into GCS and BigQuery for batch & real-time streaming and recognized as top **5% intern** for project delivery.

TECHNICAL SKILLS

- Programming Languages: Python, Java, SQL, C, C++ (Basic)
- Databases: MySQL, PostgreSQL, Teradata, NoSQL(MongoDB)
- Web Technologies: HTML, CSS, JavaScript, React, Flask, FastAPI
- Big Data & Data Engineering: ETL pipelines, Apache Spark, PySpark, Apache Kafka, Hadoop, Airflow
- Analytical Skills: Excel, Spreadsheets, SharePoint, Power BI, Data Analysis, Data Ingestion, Data Curation
- AI & ML: Numpy, Pandas, Matplotlib, Seaborn, Scikit-learn, Tensorflow, PyTorch, OpenCV, Hugging Face
- Cloud & DevOps: Amazon Web Services (AWS), Google Cloud Platform (GCP), Git, Github, Linux, Docker, Kubernetes, CI/CD
- Other Skills: Software Engineering, Coding, Code Design, Testing, Debugging, Operating System, Algorithms, Databases

ACADEMIC PROJECTS

Cloud-Based Transliteration with Vertex AI

- Built RNN, LSTM & Transformer-based ML models on GCP Vertex AI for Indian language transliteration, achieving 94% accuracy.
- Enabled a FastAPI backend on GCE, integrating with GCS for prediction services, ensuring 95% uptime & 40% faster load.

AI-Powered Attendance Management System

- Developed a real-time facial recognition system using YOLO and TensorFlow, achieving 98% accuracy for attendance tracking.
- Structured microservices using React, FastAPI, & MongoDB, for user registration & attendance logs to serve 100+ users.

MLOps Gesture Detection using YOLO

- Trained YOLO model detection on 2200 RoboFlow images, achieving 94% mean average precision for gesture-to-text translation.
- Orchestrated AWS-based MLOps pipeline using Dockerized CI/CD (EC2, S3, ECR) and Jenkins, scaling to 1000+ monthly requests.

Movie Recommendation System

- Designed a content-based recommender system with 92% accuracy using Graph Neural Network, Cosine, and Jaccard Similarity.
- Implemented feature embeddings and similarity metrics, increasing model efficiency by 30% for precise and faster recommendation.

CERTIFICATIONS & ACHIEVEMENTS

- AWS Associate Machine Learning Engineer - Amazon Web Services
- Deep Learning Specialization - DeepLearning.AI | Credential — Oct 2024
- AWS Certified Cloud Practitioner - Amazon Web Services | Credential — July 2024
- Machine Learning Specialization - DeepLearning.AI | Credential — June 2024
- GCP Associate Cloud Engineer - Google Cloud Platform | Series Id: 89931 — June 2023
- PCEP - Certified Entry Level Python Programmer - OpenEdge | Credential — May 2023