Maanasa Bhamidi
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EDUCATION: UNIVERSITY OF MASSACHUSETTS DARTMOUTH
North Dartmouth, MA

Master of Science in Technology Management | **GPA: 3.6** Anticipated May 2026
Key Courses: Operations Analysis, Logistics Strategy and Management, Information Management, Business Analytics and Data Mining, AWS theory and practice, Storytelling with data(Tableau)

SASI INSTITUTE OF TECHNOLOGY Andhra Pradesh, India
Bachelor of Science in Computer Science | **GPA: 3.5** May 2023
Key Courses: Data Structures, Algorithms, Object-Oriented Programming, SQL, Machine Learning, Data base management

PROFESSIONAL EXPERIENCE

Hitachi, Automation Trainee – Quality Assurance, Bangalore, India February 2023 – August 2023
Played a key role in the design and execution of advanced automation testing frameworks, boosting product quality and reliability. Collaborated closely with the team to detect and resolve software defects, substantially enhancing system performance.

- Actively engaged in Agile development processes, contributing to sprint planning and executing comprehensive product testing cycles in a dynamic team setting.

Atelia, Backend Developer, Hyderabad, India December 2021 – October 2022
Engineered and maintained robust backend systems for web applications utilizing Java and SQL, closely aligning development with project milestones and enhancing client satisfaction.

- Collaborated effectively with frontend teams to enhance application performance and scalability, ensuring seamless integration and optimized operation.
- Designed and implemented innovative, data-driven solutions that streamlined system processes and significantly improved the user experience.

PROJECT WORK

Facial Recognition for Automated Attendance System

- Spearheaded the design and implementation of a facial recognition-based attendance system, utilizing advanced algorithms such as Haar Cascade and LBPH to enhance accuracy and efficiency in real-time environments.
- Developed and refined facial detection and recognition modules using Python, integrating HOG and deep metric learning techniques to identify and verify student attendance in dynamic classroom settings.
- Collaborated in a multi-disciplinary team to transition from traditional attendance methods to an automated, biometric system, significantly reducing administrative time and improving system scalability.

Wine Quality Prediction

- Led the development and optimization of a machine learning model to predict wine quality using features such as tannins, acidity, and alcohol content, achieving an accuracy of 94%.
- Implemented advanced data preprocessing and feature engineering techniques, including the use of SMOTE for balancing data and PCA for dimensionality reduction, enhancing model performance.
- Collaborated with cross-functional teams to integrate predictive models into a user-friendly web application, facilitating real-time wine quality assessment and supporting decision-making for vineyard management.

AWS Elastic MapReduce (EMR) Data Analytics Pipeline.

Designed and deployed a complete AWS EMR (Elastic MapReduce) pipeline to process large-scale datasets using **Hadoop** and **Apache Spark** on a distributed cluster environment.

- Configured essential AWS components including **Amazon S3**, **VPC**, public subnets, routing configurations, security groups, and IAM roles to ensure secure, scalable EMR cluster operations.
- Created and configured EMR clusters, added Spark steps, and executed processing jobs using both the **AWS Management Console** and **AWS CLI** (including spark-submit, emr add-steps, and EMR step APIs).
- Developed **Spark-based data processing workflows** to clean, transform, and analyze health inspection datasets stored in Amazon S3.
- Utilized **CloudWatch**, EMR step logs, and cluster event logs to troubleshoot issues including IAM permission errors, cluster provisioning failures, and Spark execution problems.
- Implemented cost optimization strategies such as **transient clusters**, auto-termination, instance fleet configuration, and Spot instances.
- Designed architecture diagrams demonstrating how EMR integrates with **AWS Glue Data Catalog**, **Amazon Athena**, and **S3** to support a scalable data lake environment.
- Documented project challenges and key takeaways including IAM trust relationships, EMR bootstrap actions, S3 path errors, and Spark dependency management.

Global CO_2 Emissions & Economic Indicators – Tableau Story

- Developed an interactive **Tableau Story Dashboard** analyzing the environmental impact of global industrialization from **1990–2016** using CO_2 emissions, GDP, population, and energy-consumption datasets.
- Visualized long-term environmental and economic trends across six major economies: **United States, China, Russia, India, Brazil, and South Africa**.
- Designed narrative-driven dashboards that highlighted relationships between economic growth, emission efficiency, energy demand, and demographic patterns.
- Created multi-step Story Points to guide users through insights, including emission spikes, recession impacts, rapid industrialization phases, and energy-intensity shifts.
- Delivered data-backed insights relevant to policymakers on how **clean energy adoption, technology improvements, and economic diversification** impact emission levels.
- Ensured visual clarity and accessibility for non-technical audiences through thoughtful chart selection, color encoding, and layout optimization.
- Collaborated with team members to develop a cohesive story structure and refine analytical conclusions for academic presentation.

SKILLS

Cloud & Big Data:

AWS EMR • Big Data Analytics • ETL Pipelines • Cloud Computing

Data Visualization:

• Visual Analytics • Tableau Prep builder and Tableau • Dashboard Design • Storytelling with Data • EXCEL

Programming & Tools:

Python • R • SQL • Jupyter Notebook

Business & Management:

Business Analytics • Technology Management • Project Management • Operations Management

Soft Skills:

Communication • Collaboration • Problem Solving