MANASA BIJJALA

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EDUCATION

U OF SOUTHERN MISSISSIPPI
MS IN COMPUTER SCIENCE
May 2025 | Hattiesburg, Mississippi
Grade: 3.83/4

COURSEWORK

GRADUATE

• Cloud Computing • Machine Learning • Software Design • Computer Architecture • Database Management System • Software Engineering • Data Engineering Fundamentals

SKILLS

Languages:
• Python • R • C/C++
Python Libraries:
Pandas • NumPy • Matplotlib • Seaborn • ETL (Extract, Transform, Load)
Database:
Microsoft SQL Server • MySQL • MongoDB • Postgre SQL
Cloud:
• Azure • AWS (EC2, S3, IAM, Lambda, Athena, Quick Sight
Big Data Technologies:
• Hadoop • Apache Spark
• Apache Kafka • Docker
Data Warehousing & Storage:
• Data Warehousing • AWS Redshift
• Snowflake • S3 Bucket
Data Visualization Tools:
• Power BI • Tableau
Analytical Skills
• Data Mining • Data Cleaning
• Statistical Analysis • Data Visualization • Text Mining

CERTIFICATIONS

• Certified in Data Structures in Python – Expertise in algorithms & data manipulation.
• Achieved PCAP in Python – Validated Python programming skills.
• Certified in C++ (CPA) Strong OOP foundation.
• Achieved Blue Prism Certification – Proficient in RPA.
• Certified in Machine Learning – Intern shala Trainings, 2021

EXPERIENCE

WESTPAQ SOFTWARE SOLUTIONS | DATA ENGINEER
July 2022 - July2023 | Hyderabad, India | Remote

- Built and optimized scalable data pipelines handling 20GB daily using PySpark, HBase, SQL, MySQL, ensuring seamless data integration and processing.
- Enhanced big data performance by optimizing Spark RDDs, Data Frames, and SQL joins**,** leveraging caching, serialization, and shuffle optimization, achieving 20% faster processing and 15% improved query runtime.
- Led cloud migration from Cloudera to AWS (EMR, S3, Redshift), improving throughput by 20%, enabling scalable, high-performance data infrastructure.
- Implemented real-time streaming using Apache Kafka and Spark**,** automating pipeline orchestration with Oozie, ensuring efficient scheduling in Dev and Prod environments.
- Enabled data-driven insights by visualizing datasets in Tableau, collaborating in an Agile environment to improve data accessibility and reliability.

VERZEO | Machine Learning Intern
January 2021 - June 2021 | Hyderabad, India | Remote

- Built and trained machine learning models for various projects using Python and libraries like NumPy, Pandas and Scikit-learn.
- Gained experience in data preprocessing, feature engineering and model evaluation.
- Developed hands-on skills in data visualization using Matplotlib and Seaborn.

AWS Cloud | Virtual Internship Edu Skills, supported by AWS Academy | Oct 2021 - Dec 2022 | Remote

- Successfully completed a 10-week virtual internship program.
- Gained hands-on experience with AWS cloud services and tools.
- Developed skills in cloud computing, infrastructure management and deploying applications on AWS.

PROJECTS

RAMIE CROP DISEASE MONITORING | NSF FUNDED PROJECT
Nov 2023 - Present | Hattiesburg, Mississippi | Python, SQL, Drone Technology

- Designed data-driven precision agriculture pipelines using reinforcement learning, IoT sensors, and cloud computing, optimizing resource allocation and reducing consumption by 40%.
- Built real-time data pipelines for drone and IoT data processing using Python, SQL, AWS (S3, Redshift), improving pest control and cutting crop losses by 50%.
- Deployed machine learning models on cloud platforms, leveraging Spark, Kafka, and AWS Lambda to enable scalable, real-time insights for autonomous drone navigation.

DATA ANALYSIS BY WEB SCRAPING USING PYTHON
Aug 2021 – May 2022 | Hyderabad, India | Python, Data Cleaning

- Built an automated data pipeline using Python to scrape, clean, and process large-scale web data for real-world analysis.
- Developed scalable ETL workflows, transforming raw web data into structured insights using data cleaning and preprocessing techniques.
- Enabled data-driven decision-making by visualizing key trends, leveraging Python libraries (Pandas, Beautiful Soup, Selenium, Matplotlib) for actionable insights.