

SAI KRISHNA MANICKYAM

Software Engineer

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EDUCATION

Master of Science in Computer Science

12/2024

Kent, Ohio Kent State University

Relevant Coursework: Adv Database System Design, Machine Learning and Deep Learning, Design and Analysis of Algorithms, Information Visualization, Big Data Analytics, Foundation of AI

Bachelor of Technology in Electronics and Communication Engineering

4/2019

Visakhapatnam, India Gayatri Vidya Parishad College of Engineering (Autonomous)

RELEVANT WORK EXPERIENCE

Database Administrator, Kent State University, Kent, Ohio

08/2023-12/2024

- Analyzed and optimized large datasets to derive actionable insights, improving data accessibility and efficiency by 30% using Python and SQL.
- Designed and maintained relational database schemas, ensuring system reliability and scalability.
- Developed automated data processing pipelines to streamline data preparation for advanced analytics and machine learning models.

Software Engineer, Wipro Technologies, Hyderabad, India

05/2019 – 08/2021

- Achieved 30% improvement in database interaction efficiency by developing and optimizing Oracle SQL scripts based on user requirements.
- Optimized machine learning pipelines, integrating predictive models for transaction analysis, achieving a 15% improvement in accuracy using Python and Scikit-learn.
- Enhanced data processing speed by 40% through automated workflows and Tableau visualizations for energy data analysis.
- Migrated large-scale data to IBM Cloud Object Storage, improving accessibility by 25% using PySpark.
- Improved scalability by designing RESTful APIs and deploying microservices with IBM Cloud Functions and API Gateway.
- Engineered CI/CD pipelines with Jenkins, reducing deployment time by 35% and increasing productivity.
- Achieved 20% reduction in application response time by engineering Python applications with Django and Flask, focusing on performance and maintainability.
- Enhanced data retrieval speed by 40% by leveraging Pandas for time series and tabular data analysis.
- Reduced data handling time by 30% by automating XML parsing and database integration tasks with Python scripts.

Software Engineer Intern, Wipro Technologies, Hyderabad, India

01/2019 – 04/2019

- Prototyped predictive models for transaction analysis using Python and Scikit-learn, achieving a 15% improvement in data processing accuracy.
- Designed RESTful web services and streamlined cross-platform data exchanges, reducing latency by 25%.
- Optimized data extraction processes with PyQuery, achieving a 20% reduction in processing time.

SKILLS

Programming & Analytics: Python (Pandas, NumPy, Scikit-learn, PySpark), SQL (Oracle, MySQL), Hive, TensorFlow

Machine Learning & Modeling: Predictive Modeling, Statistical Analysis, Deep Learning (ResNet-50, U-Net, LSTM)

DevOps & Automation: Jenkins, Ansible, CI/CD pipelines, Bitbucket, IBM Cloud (Db2, Object Storage, Cloud Functions)

Visualization & Prototyping: Tableau, Power BI, Matplotlib, Seaborn

Soft Skills: Problem Solving, Attention to Detail, Communication, Teamwork

PROJECTS

Fraud Detection Model for Payment Transactions:

10/2021

Tools and Software Utilized: SQL, PySpark, TensorFlow, Hadoop, Python,

Developed and deployed machine learning models for detecting fraudulent transactions, leveraging PySpark, TensorFlow, and Hadoop. Improved fraud detection rates by 18%.

Medical Image Analysis:

12/2021

Tools and Software Utilized: ResNet-50, U-Net, TensorFlow, Python, Pandas

Designed deep learning pipelines using ResNet-50 and U-Net architectures for medical image classification and segmentation. Delivered 90% accuracy in pneumonia detection.

Web-Based Data Visualization Platform

10/2022

Tools and Software Utilized: Python, K-means, Scikit-learn, Tableau

Implemented K-means clustering to analyze binary sensor data for smart home applications, achieving 83.4% accuracy in activity recognition.

Heartbeat Sound Classification and Segmentation

05/2023

Tools and Software Utilized: LSTM, Python, TensorFlow, Librosa, Pandas

Developed an LSTM-based pipeline for heartbeat sound analysis, achieving 92% accuracy in early heart disorder detection.

VOLUNTEER EXPERIENCE

- Member of Rotaract Club of Vizag Metro (2016), organized events including a breast cancer awareness marathon and school painting competitions and volunteered in blood donation and book distribution for orphans.