BHARGAV REDDY MUNNANGI

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SUMMARY

Data Analyst with 6 years of experience in finance, manufacturing, and construction, specializing in **SQL**, **Python**, and **Power BI** for cost analysis, process optimization, and data-driven decision-making.

PROFESSIONAL EXPERIENCE

Larsen & Toubro, Chennai, India

Jul 2018 – Aug 2022

Data Analyst (Assistant Engineering Manager)

- Designed SQL-based cost analytics to address budget overruns in construction projects, identifying inefficiencies and achieving quarterly savings exceeding \$2 million through optimized resource allocation.
- Developed Power BI dashboards to provide real-time visibility into cost deviations and productivity metrics, expediting decision-making and proactively resolving issues, including a 15% labor efficiency decline.
- Executed data preprocessing and exploratory analysis with Python (Pandas, Matplotlib) to enhance forecasting accuracy, reducing errors by 20% and bolstering budget reliability.
- Collaborated with cross-functional teams to refine machine learning models for cost estimation, decreasing forecasting errors by 18% and improving budgetary precision.

Larsen & Toubro, Delhi, India

Jul 2016 – Jun 2018

Data Analyst (Senior Engineer)

- Analyzed construction project financials using SQL, identifying cost inefficiencies and improving cost control.
- Developed Excel-based dashboards with pivot tables and lookup functions to track expenses, contractor performance, and work progress metrics.
- Assisted in ETL processes using AWS S3, transforming unstructured data into standardized formats for reporting.
- Applied statistical modeling in Python to improve cost estimation accuracy by 15%, strengthening the foundation for project financial planning.

PROJECT EXPERIENCE

Conversational AI Chatbot for Project Management

- Developed and deployed a conversational AI chatbot using Python, Rasa, NLTK and NLP libraries to automate data extraction from project documentation and assist in tender works.
- Implemented Natural Language Understanding (NLU) and Dialog Management with Rasa, GPT-3/BERT, and rule-based fallback mechanisms, ensuring accurate, context-aware responses and reducing manual workload.

AI-Driven Structural Optimizer

- Saved \$12.5M YoY by developing an AI-powered optimization engine using Differential Evolution to minimize costs while optimizing structural design parameters.
- Implemented black-box optimization, constraint handling, and simulation-based validation to generate data-driven design recommendations and automated BOQ reports.

TECHNICAL SKILLS

Programming Languages: Python (NumPy, Pandas, Matplotlib, Seaborn, Scikit-learn), SQL, R

Tools: Git, Appian, UI Path, KNIME, Excel, Solver, Power BI, Tableau, Tableau Prep, SAS, Alteryx, SQL SRSS

Data Engineering: ETL Pipelines, Apache Spark, Hadoop, AWS (S3, Redshift, Glue), Snowflake

Core Competencies: Data Science, Data Visualization, Business Intelligence, Data Mining, Agile Methodologies,

EDUCATION

The University of Texas at Dallas

Aug 2023 – May 2025

Master of Science, Business Analytics & Artificial Intelligence

The University of Texas at Austin

Jan 2022 – Jan 2023

Post Graduate Program, Data Science & Business Analytics

AWARDS

Engineering Innovation Award, *Larsen & Toubro* Outstanding Performer, *Larsen & Toubro*

Dec 2021