### MADHUMITHA MURALI

(515)-815-4056 | madhumitha.murali8@gmail.com | LinkedIn | Website

# **PROFESSIONAL SUMMARY**

Passionate and detail-oriented professional with a robust background in data analysis, engineering, and project management. Leveraging advanced skills in SQL, diverse data visualization tools, and ETL processes to unlock actionable insights from complex datasets. Proficient in ensuring data integrity, innovating solutions, and committed to collaborative leadership, seamless integration, and meaningful contributions within data analysis and engineering. Eager to apply these skills and passion in a new role to drive impactful outcomes.

#### **EDUCATION**

### **Master of Science in Information Systems**

Aug 2022 - Present

Iowa State University, Ames, Iowa, United States; CGPA: 3.67

**Bachelor of Engineering in Computer Engineering** 

SIES Graduate School of Technology, India

May 2019

### **PROFESSIONAL EXPERIENCE**

## Data Research Analyst Intern, Kingland Systems LLC, Iowa, United States

August 2022 - Present

- Conducted comprehensive due diligence procedures, employing meticulous research methodologies to furnish validated data crucial for strategic decision-making.
- Spearheaded data revalidation initiatives, resulting in a 15% enhancement in automation efficiency for in-house fund profiling services, aligning data quality with industry standards.
- Implemented measures to maintain data integrity, driving operational efficiency, and ensured adherence to industry-leading data quality standards while managing and mentoring a junior team for seamless integration through training sessions.

### **Graduate Teaching Assistant,** *Iowa State University, Iowa, United States*

August 2022 – Present

• Instructed students in employing advanced techniques within Microsoft Excel spreadsheets and Microsoft Access databases, enabling comprehensive data manipulation, analysis, and business application proficiency.

# Senior Data Engineer, Larsen and Toubro Infotech, Mumbai, India

Sept 2019 - July 2022

- Led a team of 10 members while orchestrating diverse ETL processes using Informatica PowerCenter, managing extraction, transformation, and migration of substantial data volumes, ensuring project success and efficient data warehouse utilization.
- Optimized Informatica mappings and database handling in SQL Server Management Studio, achieving a 25% increase in data processing efficiency, enhancing data reliability, and enabling improved analytics team operations.
- Spearheaded data modeling, testing, and analysis efforts, collaborating cross-functionally to drive sophisticated analytical solutions aligned with business objectives, while initiating skill enhancement initiatives for SQL, MS Excel, and Informatica PowerCenter development across the team.
- Received 'Outstanding Performer' recognition for two consecutive years, showcasing dedication and consistent excellence.

#### **Intern**, Nuclear Power Corporation of India Limited, India

**June - July 2018** 

Created a standard data validation library for the organization using JavaScript for various web applications.

## **SKILLS**

| • | SQL / T-SQL       | • | Tableau       | • | Data Transformation | • | Data Mining                 |
|---|-------------------|---|---------------|---|---------------------|---|-----------------------------|
| • | Power BI          | • | Python        | • | Data Visualization  | • | Data Dashboards             |
| • | Microsoft Azure   | • | Jira          | • | Data Modeling       | • | Requirement Gathering       |
| • | Microsoft Excel   | • | Scrum         | • | Data integration    | • | Quality Assurance           |
| • | Microsoft Project | • | Data Cleaning | • | Data Validation     | • | <b>Project Coordination</b> |
|   |                   |   |               |   |                     |   |                             |

#### **ACADEMIC PROJECTS**

# Flight Analysis: Unlocking Business Insights from Airline Performance Data

• Executed comprehensive ETL development using Microsoft Azure, transforming daily flight data from multiple carriers—United Airlines, Frontier Airlines, and Southwest Airlines—into a SQL database. Utilized Power BI to craft insightful visualizations, analyzing and presenting trends in cancellations, delays, and on-time performance across these major airlines.

### **Excel Solver**

• Used Excel Solver to decide how many tables to produce/store at each quarter to meet the demand at the minimum total production and inventory holding cost.

### Predictive Maintenance of Heavy Commercial Vehicles Using ML and Data Analytics

- Executed the front-end UI development of a website by integrating raw vehicle data from a client's notebooks into the database, leveraging it to predict Heavy Commercial Vehicles breakdown probability via a FUZZY algorithm, optimizing maintenance efficiency.
- Published findings from the project in the International Journal of Computing Science, contributing substantively to the field's advancements. (http://ijics.com/gallery/116-april-1076.pdf)