Nandini Ethirajulu

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EDUCATION

University at Buffalo, The State University of New York — Buffalo, NY
Master of Science – Data Science and Applications

EXPERIENCE

Local Grown Salads — Remote, United States
Data Engineer — February 2025 - Present

- Performing database mapping between Odoo MRP/ERP and PostgreSQL, using Python to automate data integration for customer information, farming formulas, and operational details.
- Collaborating with 5+ cross-functional teams to update and store customer-specific data, manage work orders, and streamline data flows based on business requirements. Supporting the recall functionality by developing Python scripts and database queries to fetch product manufacturing and delivery details from PostgreSQL, ensuring traceability and compliance.

Deloitte Consulting — Chennai, TN, India
Data Analyst — June 2021 - July 2023

- Designed and optimized 300+ SSIS ETL workflows to extract, transform, and load (ETL) high-volume data into a data warehouse, supporting business intelligence reporting for Tennessee State's Benefits System.
- Developed a master ETL orchestration framework, enabling automated execution, logging, and error handling, reducing ETL downtime by 90% and improving data pipeline efficiency.
- Wrote complex SQL queries, stored procedures, and views in Oracle PL/SQL, leveraging CTEs, partitioning, and indexing to process 200+ business-critical reports with enhanced performance.
- Applied data modeling best practices to design fact and dimension tables, supporting Tableau dashboards that provided real-time insights into transactional, eligibility, and benefit issuance data.
- Created federal compliance reports in fixed-length CSV format, integrating business logic to provide structured data submissions to the Administration for Children and Families (ACF).
- Enhanced ETL performance by 43% through data cleansing, redundancy elimination, and transformation, ensuring accurate and efficient integration across systems.
- Collaborated with business stakeholders, analysts, and developers to define BI reporting requirements, ensuring data accuracy, dashboard usability, and KPI tracking. Developed Tableau dashboards for executive-level reporting, providing actionable insights into Eligibility Determination, Benefits Issuance, and Claims data, increasing reporting efficiency by 29%.

Deloitte Consulting — Chennai, TN, India
Associate Analyst — August 2019 - May 2021

- Extracted, transformed, and standardized multi-source datasets for a Legacy System Conversion initiative for the State of Connecticut, ensuring 98% data accuracy and alignment with business intelligence requirements. Improved ETL efficiency by refining SSIS workflows and SQL-based transformations, reducing processing time by 50% and ensuring near-zero data loss.
- Migrated cleansed and structured data into target systems using Salesforce's Bulk API, enhancing data accessibility, downstream analytics, and compliance reporting. Led UAT, system validation, and data reconciliation, ensuring migrated data maintained its accuracy, consistency, and traceability across business operations and BI reports.

PROJECTS

Analysis of Patient Satisfaction in healthcare – A Multiple Regression Approach Using SAS — November 2024 – December 2024

- Built a multiple regression model in SAS to predict patient satisfaction, achieving 97.81% R^2.
- Identified key drivers: staff visits (40%), nurse count (7%), and patient age (negative impact).
- Validated model accuracy by predicting satisfaction scores for new patients within a 95% confidence interval (34.13 – 41.29), supporting data-driven decision-making in patient care.

Loan Repayment Prediction Analysis — November 2024 – December 2024

- Preprocessed 37,408 loan records, applied Principal Component Analysis (PCA) to retain 87% variance, and used SMOTE to handle class imbalance, improving model training for default risk prediction.
- Developed logistic regression models, achieving 72.64% balanced accuracy and AUC of 0.78, effectively distinguishing between successful repayments and defaults, supporting risk assessment and lending decisions.

Market Basket Analysis of Customer Purchase Behavior — February 2024 – April 2024

- Transformed customer orders dataset, extracted from CRM into a binary transaction matrix, enabling the application of the Apriori algorithm to uncover high-confidence product associations.
- Applied Apriori to identify the top 10 association rules, with the top rule achieving 97.64% confidence and a lift of 2.12, providing actionable insights for optimizing product bundling, promotions, and inventory strategies.

DBMS Project — September 2023 – December 2023

- Implemented a normalized Oracle SQL database for banking operations, using data modeling and an ER diagram to define relationships between a fact table and 9-dimension tables, while applying integrity constraints for data consistency.
- Developed optimized SQL queries for transactional and analytical purposes, leveraging indexing, partitioning, and complex joins for efficient data retrieval and reporting.

TECHNICAL SKILLS

Programming Languages:	Python, R, Oracle PL/SQL, Java, SAS, Snowflake, HTML, CSS, JavaScript
Data Analysis and Visualizations:	Machine Learning, Statistical Data Mining, SSIS, Tableau, Power BI
Database Management:	Oracle, MS SQL Server, MySQL, Excel, PostgreSQL
Tools:	Visual Studio, R Studio, Microsoft Office Suite, GitHub, Bitbucket, Jira, Odoo
Domains:	Benefits and Claims Data, Data Warehousing, Loan Default Prediction, Agile Framework