Ritika Dharamkar

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EDUCATION

University of Cincinnati, Cincinnati, Ohio **January 2023 - May 2024**
Master of Science: Information Technology

J.B. Institute of Engineering and Technology, Hyderabad, India **October 2013 - May 2017**
Bachelor of Science: Electronics and Communication Engineering (ECE)

PROFESSIONAL EXPERIENCE

Software Engineer, Amazon Development Center, Hyderabad, India **July 2017 - December 2022**

- Leveraged Apache Kafka and AWS Data Pipeline technologies for designing fault-tolerant data movement systems.
- Utilized Apache Airflow workflow management tool for orchestrating data movement and ingestion workflows.
- Implemented ETL (Extract, Transform, Load) processes using Apache Spark or AWS Glue to cover requirements analysis, coding, testing, and deployment across varied environments (e.g., AWS, Azure).
- Conducted comprehensive performance analysis and diagnostics of existing systems, proactively implementing maintenance strategies to optimize application performance and facilitate future upgrades.
- Leveraged SQL proficiency to extract actionable insights from fraud transactions, resulting in a 20% reduction in fraudulent activities and driving key business decisions.
- Analyzed data points alongside live product detail pages (PDPs) of top-ranked ASINs, identifying and addressing ASIN Attribute Abuse signals, leading to a 30% decrease in ASIN Hijacking and mis-categorization abuse incidents.

Full Stack Developer Intern, University of Cincinnati, Ohio **September 2023 - Present**

- Developed and implemented the Research Tracking System project, streamlining the compilation of university professors' research endeavors by leveraging Puppeteer to scrape data from ORCID and Scopus websites.
- Developed a scalable SQL database architecture. Boosted backend efficiency with Node.js and Express.js improving system performance by 30% and reducing response times by 50%.

Teaching Assistant, University of Cincinnati, Ohio **May 2023 - December 2023**

- Delivered video lectures and instructed Python, SQL, and GitHub to University of Cincinnati students, staff, and faculty, including in-person workshops for up to 200 participants.
- Contributed to curriculum development for CS1005 Introduction to Programming with Python & R, a mandatory course for 300 undergraduate students in the CEAS college.

IEEE PUBLICATIONS

Smart Temperature Management in Buildings Using Predictive Analysis by Machine Learning Algorithms **March 2023**

- Accepted for IEEE CPS proceedings and presentation at CSCI 2023 conference. Conducted comprehensive model evaluation for Linear Regression, Random Forest, and Decision Tree Machine Learning models to predict heating load and cooling load values based on building parameters.
- Demonstrated expertise in statistical analysis by achieving the highest R-squared value and lowest Mean Absolute Error (MAE) and Mean Squared Error (MSE) using the Random Forest Regressor for both heating and cooling load predictions.

Predicted Cyberbullying Behavior in Social Media Using Machine Learning Techniques **August 2023**

- Utilized MLP, Naïve Bayes, XGBoost, CatBoost, LR, & SVM algorithms to predict cyberbullying behavior on Twitter.
- Identified CatBoost as the most effective algorithm with 83% accuracy and 84% F1 score for cyberbullying detection on Twitter. Accepted for IEEE publication in the 3rd International ICMI 2024 Conference.

TECHNICAL PROJECTS

Azure Data Engineering Project **January 2024**

- Created an end-to-end Azure Data platform from data ingestion, data transformation, data loading & reporting.
- Leveraged SQL server, Azure data factory, Azure Databricks, Spark SQL, and Power BI to integrate seamlessly with Azure Synapse Analytics to build an interactive Dashboard for data visualization and analysis.

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Predicting Profit/Loss of Future Sales Using Different Machine Learning Algorithms **March 2023**

- Predicted demand for which size of clothes are to be produced more for profits using the SVM, MLP, & DT ML models based on past sales data. Decision Tree outperformed the rest with 98.6% Accuracy and 98.2 F1 Score.

COMPUTER & TECHNICAL SKILLS

Programming Skills: Python, Java, JavaScript, Data Engineering/ETL/ELT (Spark, Azure Data Factory, SQL, Custom Programs), Microsoft SQL,MySQL, T-SQL, PostgreSQL, SQLite, Database Management (SQL Server, Azure Blob, Data Lake)
Python Libraries: NumPy, Pandas, TensorFlow, PyTorch, or scikit-learn, Keras, Flask
Cloud Technologies: Amazon Web Services, Microsoft Azure, Google Cloud Platform
Tools & Services: Tableau, Power BI, Git, Google Analytics, SharePoint, SAS, JIRA, DBeaver, Event Transfer Systems (Kafka, Azure EventHubs), Non-relational Data Sources (CosmosDB, No/Low SQL)
Operating Systems: Mac OS, Windows, Linux

HONORS & AWARDS

2017 Shining Star Award, Amazon – Awarded as Best New Employee on team of a 200-employee size.
2019 *Best Employee of the Year, Amazon* - Received yearly award as Best Employee of the Year, 2019 within Amazon.

CERTIFICATIONS

DP900 Microsoft Azure Data Fundamentals