MEGGNA KARTHIKEYAN

North Dartmouth, MA (Open for Relocation) | +1 (774) 704-0262 | kmeggna@gmail.com | LinkedIn | GitHub | Portfolio

SUMMARY

Data Engineer with **2+ years of experience** in cloud computing, data pipeline automation, and ETL using GCP, AWS, Python, and SQL, optimizing CI/CD and migration processes at Cognizant. Currently researching gravitational wave signal analysis at UMass Dartmouth, focusing on data-driven detection improvements.

WORK EXPERIENCE

Data Analyst - Graduate Research Assistant, UMass Dartmouth   **May 2024 - Current**
- Analyzing LIGO and Virgo trigger patterns to investigate Virgo's lower sensitivity & non-coincident detections in GW observations.
- Developing Python pipelines to process simulated injection data and identify inconsistent or missed Virgo signals.
- Contributing to LISA-aligned research by exploring detection metric improvements for multi-detector analyses.

Data Management & Quality Specialist, UMass Dartmouth   **March 2024 - May 2024**
- Maintained high data integrity by transcribing legacy manuals and handbooks with 99%+ accuracy, ensuring clarity & consistency.
- Digitized and preserved 5+ historical documents, improving data accessibility and supporting long-term archival goals.
- Structured and cataloged extensive documentation, enhancing retrieval speed and data management efficiency.

Data Engineer, Cognizant, Chennai, India   **September 2022 - June 2023**
- Enforced row-level security in GCP BigQuery and managed IAM roles, reducing unauthorized access by 90%.
- Streamlined CI/CD pipelines for data transitions via AWS Fargate, accelerating processing by 65% with Docker and AWS CloudWatch.
- Led end-to-end migration monitoring, reducing errors by 70-85%. Delivered reports while managing two teams of 5+ members.

Programmer Analyst, Cognizant, Chennai, India   **August 2021 - August 2022**
- Automated ETL workflows and Airflow DAGs, enhancing database management and reducing manual intervention by 50%.
- Refined 50+ Airflow pipelines, enhancing data validation and reconciliation to boost efficiency by 60%.
- Ensured 99% defect-free UAT, maintaining high standards in data quality and supporting timely and reliable deployments.

Data Integration Full Stack Developer Intern, Cognizant, Chennai, India   **February 2021 - July 2021**
- Led a team of 150+ interns, delivering large-scale data integration projects using database management best practice.
- Improved SQL performance by 30% and optimized cloud infrastructure on AWS & GCP, boosting deployment efficiency by 25%.
- Built ETL solutions with Informatica, Talend and IBM DataStage, decreasing processing time by 40%.

PROJECTS

Spotify SQL Analytics & Query Optimization | Link   **February 2024 - March 2024**
- Performed in-depth analysis on 17,500+ Spotify tracks using advanced SQL (CTEs, window functions), revealing trends in energy, liveness, and platform-specific streaming behavior.
- Reduced query execution time by 97% through PostgreSQL indexing and EXPLAIN ANALYZE, significantly boosting performance for analytical workloads.

Uber Data Engineering & Analytics on GCP | Link   **December 2023 - January 2024**
- Built a scalable ETL pipeline using Mage AI and BigQuery, processing 1M+ ride records to enable real-time insights via Looker Studio dashboards. Identified peak ride windows and optimized fare segments driving targeted pricing & promotional strategies.
- Analyzed payment behavior showing 24.6% tip rate, with credit card users tipping 2x more, informing Uber's cashless incentive strategy.

SKILLS

Cloud: GCP (Google Cloud Storage, Google BigQuery, Google IAM), AWS (Amazon ECR, Amazon ECS, Amazon S3, Amazon Fargate, Amazon CloudWatch); Apache Kafka, Docker, Apache Airflow, EDH
Programming: Python, SQL, MATLAB, R, Git
Data: Pipelining & ETL, Warehousing & Storage, Migration & Integration, Governance & Security, Data Mining & Processing
Tools: Tableau, Power BI, Excel, Word, PowerPoint
Soft Skills: Collaboration, Communication, Problem-Solving, Leadership, Adaptability, Decision-Making, Stakeholder Management

EDUCATION

University of Massachusetts Dartmouth, North Dartmouth, **Massachusetts**   **Expected August 2025**
Master of Science in Data Science: Grade - 3.85/4
Jeppiaar Engineering College, Chennai, India   **September 2017 - April 2021**
Bachelor of Engineering in Electronics and Instrumentation Engineering: Grade - 3.45/4

AWARDS AND RECOGNITIONS

Cognizant Cheers: Employee Recognition Award
Contributed to data engineering and pipeline optimization in the Bayer A-EMEA Crop Science Warehouse project; recognized for leadership, problem-solving and innovation, resulting in a 12.5% salary hike.

CERTIFICATIONS

Tableau Certified Data Analyst, Google Data Analytics, Python for Data Science, Ai & Development, Atlassian Agile Project Management, Data Analysis with Python, HackerRank SQL (Basic & Intermediate), Databricks Fundamentals, Business Analysis Fundamentals