

MEGGNA KARTHIKEYAN

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SUMMARY

Results-driven Data Engineer and Analyst with over 3 years of experience in both industry and academic research. Skilled in building cloud-based data pipelines, automating ETL processes, and performing advanced analytics using Python, SQL, GCP, and AWS. Demonstrated success in optimizing CI/CD workflows, delivering scalable solutions, and generating actionable insights for enterprise systems and scientific initiatives — including NASA-affiliated research at UMass Dartmouth and large-scale data migrations at Cognizant.

EDUCATION

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| 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 | |

SKILLS

Languages: Python, SQL, MATLAB, R
Data & Analytics: EDA, Statistical Analysis, Data Mining, Forecasting, Data Modeling, Data Warehousing, Data Governance
Databases: BigQuery, SQL Server (MSSQL), MySQL, PostgreSQL
Tools & Platforms: Tableau, Power BI, Excel, Alteryx, Airflow, Docker, Git, Looker Studio
Cloud & ETL: Google Cloud Platform (BigQuery, GCS, IAM), Amazon Web Services (S3, ECS, Fargate, CloudWatch), ETL Pipelines, Data Migrations, Kafka
Soft Skills: Critical Thinking, Communication, Stakeholder Engagement, Problem Solving, Team Collaboration, Leadership, Adaptability

WORK EXPERIENCE

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| Data Analyst - Graduate Research Assistant, UMass Dartmouth | May 2024 - Current |
| <ul style="list-style-type: none">Collaborated with stakeholders to define objectives addressing Virgo's reduced sensitivity and instances of missed Gravitational Wave detections.Developed Python-based data pipelines with the research team to analyze simulated injections and identify non-coincident triggers from Virgo.Supported NASA and ESA-aligned LISA research by proposing improved detection metrics to enhance multi-detector signal reliability. | |
| Data Engineer, Cognizant, Chennai, India | February 2021 - June 2023 |
| <ul style="list-style-type: none">Implemented BigQuery row-level security and IAM role in collaboration with stakeholders, reducing unauthorized access by 90%.Enhanced CI/CD pipeline efficiency by 65% by optimizing Docker deployments on AWS Fargate and fostering cross-team coordination.Led comprehensive data migration efforts across AWS and GCP, reducing errors by 70–85% through effective team management and adaptive change control.Automated ETL workflows and Airflow DAGs, cutting manual database operations by 50% and significantly improving process efficiency.Redesigned 50+ Airflow pipelines with advanced validation and reconciliation mechanisms, boosting operational efficiency by 60%.Improved SQL query performance by 30% and optimized cloud infrastructure on AWS and GCP, leading to a 25% increase in deployment efficiency. | |

PROJECTS

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| Spotify SQL Analytics & Query Optimization Link | February 2024 - March 2024 |
| <ul style="list-style-type: none">Analyzed 17,500+ Spotify tracks using advanced SQL to uncover trends in energy, liveness, and streaming behavior.Improved query performance by 97% using PostgreSQL indexing and EXPLAIN ANALYZE. | |
| Uber Data Engineering & Analytics on GCP Link | December 2023 - January 2024 |
| <ul style="list-style-type: none">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. | |

AWARDS AND RECOGNITIONS

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| Cognizant Cheers: Employee Recognition Award |
| Led stakeholder discussions to define core objectives, aligned engineering teams to streamline data flow, and drove measurable improvements in Bayer AEMEA Crop Science — earning recognition for strategic execution, collaboration, and technical excellence. |

CERTIFICATIONS

[Tableau Certified Data Analyst](#), [Google Data Analytics](#), [Alteryx Designer Core](#), [Python for Data Science, AI & Development](#), [Atlassian Agile Project Management](#), [Data Analysis with Python](#), [HackerRank SQL \(Basic & Intermediate\)](#), [Business Analysis Fundamentals](#)