

PROFILE

Data Analytics and Optimization professional with 10+ years of experience designing enterprise analytics solutions, automating data workflows, and transforming large-scale datasets into actionable business insights. Proven track record of developing analytical platforms, decision-support tools, performance monitoring dashboards, and forecasting solutions that improve operational efficiency and support strategic decision-making. Experienced in advanced analytics, process optimization, stakeholder engagement, and cross-functional collaboration. Skilled in Python, SQL, PostgreSQL, Power BI, ArcGIS, data visualization, and enterprise analytics technologies.

ATLANTA REGIONAL COMMISSION

Principal Data Analyst

Nov 2022 - Present

- Lead enterprise-scale analytics initiatives and Activity-Based Model (ABM) data integration efforts supporting operational performance monitoring, forecasting, scenario evaluation, and executive decision-making across a 21-county region.
- Design and maintain integrated analytical data environments combining transportation, mobility, demographic, and socioeconomic datasets to support forecasting, reporting, resource planning, and decision-support applications.
- Develop and automate scalable SQL, PostgreSQL, and Python workflows to ingest, transform, validate, and standardize large-scale datasets from public, commercial, and internal sources.
- Collaborate with business stakeholders, technical teams, and executive leadership to gather requirements, define analytical objectives, and deliver data-driven solutions supporting operational and strategic initiatives.
- Establish data quality, validation, governance, and documentation processes to improve reliability, consistency, and usability of enterprise analytical assets.
- Develop reusable reporting frameworks, standardized analytical workflows, and integrated data products that improve efficiency, scalability, and accessibility of analytical information.
- Design and develop enterprise analytics platforms integrating Activity-Based Model outputs with multiple internal and external datasets to support operational analysis, forecasting, performance evaluation, and scenario comparison.
- Analyze and integrate large-scale origin-destination, mobility, and performance datasets to identify trends, measure system performance, and support data-driven operational decision-making.
- Conduct statistical analysis, forecasting, and trend evaluation to identify operational patterns, assess performance outcomes, and support strategic planning initiatives.
- Design and implement interactive dashboards, geospatial applications, and decision-support tools using Python, SQL, ArcGIS Online, D3.js, Leaflet, JavaScript, and ArcGIS Experience Builder.
- Develop advanced analytical visualizations and self-service reporting tools enabling stakeholders to monitor performance metrics, evaluate trends, and explore operational scenarios.
- Present analytical findings, recommendations, and technical solutions to executive leadership, business stakeholders, technical committees, and regional partners.
- Lead stakeholder engagement and knowledge-sharing initiatives through the Atlanta Regional Commission Model Users Group (MUG), promoting adoption of analytical tools, best practices, and data-driven decision making.
- Developed automated analytical workflows and scalable reporting solutions that reduced manual data preparation efforts, improved data accessibility, and enabled faster decision-making for planners, analysts, and leadership teams.
- Developed predictive analytics and machine learning models using Python to support forecasting, trend analysis, scenario evaluation, and data-driven decision-making.

EXPERIENCE

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- Delivered analytics, data integration, and operational improvement solutions supporting transit operations, infrastructure evaluation, asset management, service reliability, and customer service initiatives across the MARTA service area.
- Developed GIS-based applications, interactive dashboards, and analytical tools to support field operations, asset inventories, inspection programs, and operational data collection workflows.
- Integrated and standardized data from multiple internal and external sources to support performance monitoring, reporting, operational analysis, and data-driven decision-making.
- Designed and automated reporting, visualization, and dashboard workflows using ArcGIS, Power BI, Excel, and GIS technologies, improving reporting efficiency and stakeholder access to operational insights.
- Performed statistical analysis, forecasting, and performance evaluation to identify trends, assess service utilization, support resource planning, and improve operational effectiveness.
- Produced executive-level dashboards, reports, maps, and analytical presentations for leadership teams, technical committees, and business stakeholders to support strategic and operational initiatives.
- Collaborated with cross-functional teams to identify business needs, define analytical requirements, and develop solutions that improved operational visibility and decision support capabilities.
- Leveraged operational and ridership datasets to monitor key performance indicators, identify improvement opportunities, and support data-driven recommendations for service and infrastructure planning.

Data Architecture & Data Modeling

- Data Modeling
- Relational Database Design
- Entity Relationship Diagrams (ERDs)
- Data Integration
- Data Transformation
- Data Validation
- Data Quality Management
- Dimensional Modeling
- Data Warehousing Concepts
- Requirements Gathering & Analysis
- Data Documentation
- Business Process Analysis\

Databases & Data Engineering

- SQL
- PostgreSQL
- SQL Server
- PostGIS
- Database Development
- ETL Workflow Development
- Data Pipeline Development
- Query Optimization
- Data Migration & Standardization
- Analytics & Statistical Modeling
- Python
- R

Statistical Analysis

- Bayesian Analysis
- Machine Learning
- Predictive Analytics
- Forecasting
- Scenario Analysis
- Decision Support Analytics

Visualization & Reporting

- Power BI
- D3.js
- ArcGIS Experience Builder
- ArcGIS Online
- Leaflet
- Interactive Dashboard Development
- Executive Reporting
- Data Storytelling

GIS & Spatial Analytics

- ArcGIS Pro
- ArcMap
- QGIS
- PostGIS
- Geospatial Analysis
- Spatial Data Processing
- Network Analysis
- Origin-Destination Analytics
- Spatial Data Integration

Transportation & Domain Expertise

- Activity-Based Modeling (ABM)
- Travel Demand Modeling
- Transportation Forecasting
- Mobility Data Analytics
- Transportation Conformity Analysis
- EPA MOVES Emissions Modeling
- Origin-Destination Analysis
- Transportation Performance Evaluation

SKILLS

EDUCATION

Georgia Institute of Technology

08/2023 - 05/2026

Master of Science in Analytics

Computing Track

Texas A&M University

08/2017 - 05/2019

Master of Urban Planning

Transportation Planning Certificate

Geospatial Certificate

Azad University

09/2011 - 02/2016

Bachelor of Urban Planning

AWARDS

2019 American Planning Association Outstanding Student

ABMVIZ

Spring 2026

- Designed and developed ABMVIZ, an enterprise-scale analytics platform integrating millions of Activity-Based Model (ABM) trip records to support operational analysis, forecasting, scenario evaluation, and data-driven decision-making across Metro Atlanta.
- Integrated and standardized large-scale transportation, mobility, socioeconomic, and GIS datasets using Python, PostgreSQL, and spatial data processing techniques to support reporting, performance monitoring, and model validation.
- Developed interactive dashboards and geospatial analytics tools enabling comparative analysis of travel demand, origin-destination patterns, accessibility, and system performance across multiple planning horizons.
- Designed scalable data structures and automated analytical frameworks supporting cross-scenario validation, benchmarking, forecasting, and decision-support applications.
- Optimized data processing and visualization performance through data aggregation, dynamic filtering, and efficient spatial architectures, enabling rapid exploration of large-scale datasets and improved analytical efficiency.

ODMAP

Fall 2025

- Designed and developed ODMAP, an enterprise-scale analytics platform integrating six major transportation and mobility datasets, including INRIX, Replica, LODS, CTPP, NextGen NHTS, and Teralytics.
- Processed and integrated millions of origin-destination records into a unified analytical environment supporting operational analysis, trend evaluation, performance monitoring, and data-driven decision-making.
- Standardized heterogeneous datasets with differing spatial, temporal, and schema structures to enable cross-dataset analysis, data consistency, analytical interoperability, and scalable reporting.
- Developed interactive dashboards and analytical tools supporting exploration of travel patterns, origin-destination flows, accessibility metrics, and key performance indicators across multiple data sources.
- Enabled data-driven decision-making through comparative analysis of mobility trends, trip patterns, and performance metrics derived from multiple public and commercial datasets.

NexGEN NHTS Local Add-On

Spring 2024

- Developed an interactive analytics platform using ArcGIS Experience Builder to support operational analysis, travel behavior insights, forecasting, and data-driven decision-making.
- Processed and transformed large-scale block group-to-block group trip datasets into scalable analytical data structures and county-level origin-destination tables, improving accessibility and performance of enterprise analytics workflows.
- Designed interactive dashboards and reporting tools enabling stakeholders to explore travel patterns, origin-destination flows, and performance trends across multiple geographic levels.
- Integrated recurring transportation datasets and developed automated data processing and aggregation workflows to improve efficiency, consistency, scalability, and reliability of high-volume analytical operations.

KEY PROJECTS