

# Md Istiaq Ahmed

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## EDUCATION

### Southeast Missouri State University

*Bachelor of Science in Computer Science*

Cape Girardeau, MO

Jan. 2022 – Dec. 2025

## EXPERIENCE

### Software Engineer & Co-Founder

*Cran US LLC*

Oct 2024 – Jun 2025

*Cape Girardeau, MO*

- Partnered with business stakeholders to identify operational challenges and translate qualitative needs into data-driven solutions, enabling rapid product iteration and strategic decision-making for early-stage SaaS growth.
- Built end-to-end data infrastructure and analytics workflows to track user behavior, feature adoption, and operational performance, transforming raw business data into actionable insights through visualizations and metrics.
- Owned full development life cycle from requirements gathering through production deployment, demonstrating accountability for business outcomes and ability to deliver scalable solutions in fast-paced startup environment.

### Data Entry Assistant

*Southeast Missouri State University*

Sep 2024 – Dec 2025

*Cape Girardeau, MO*

- Managed patron records in CRM system, ensuring high data quality and consistency.
- Developed Excel-based tools to coordinate schedules and optimize team workflows.

### Computer Science Tutor

*Southeast Missouri State University*

Jan 2023 – Apr 2023

*Cape Girardeau, MO*

- Tutored students in Python, Java, Unix/Linux, and statistics (z-tests, t-tests, hypothesis testing) in both individual and group sessions.
- Helped non-technical students debug code and strengthen analytical problem-solving techniques.

## PROJECTS

### Github Activity Pipeline | *SQL, Python, Airflow, AWS, Snowflake, dbt, Docker*

*Dec 2025 – current*

- Built an end-to-end ELT pipeline ingesting 2,000+ GitHub events daily via REST APIs using Python, orchestrated with Apache Airflow on a 6-hour schedule and maintaining 98% pipeline reliability. [Github](#)
- Designed a scalable AWS data lake using S3 date-based partitioning and Snowflake external stages and applied lateral flatten for nested JSON processing, cutting query costs by 40% through partition pruning.
- Built dimensional models in dbt transforming nested JSON into analytics tables with 12+ data quality tests ensuring 100% accuracy and deployed at \$8/month operational cost through AWS optimization.

### SaaS Subscription Analytics Warehouse | *SQL, dbt, Snowflake, Power BI*

*Sep. 2025 – Nov. 2025*

- ETL project designed with dimensional data warehouse modeling SaaS subscription business logic with synthetic payment data (500K+ transactions, 100K customers) using star schema with daily-grain fact table to support both point-in-time MRR snapshots and cohort trend analysis. [Github](#)
- Built 15+ dbt models calculating MRR components and cohort metrics and used Power BI executive dashboard visualizing growth trends, churn evolution, and retention heatmaps.
- Created 40+ dbt tests validating referential integrity, metric calculation logic, and business rules.

### Predictive Analytics Pipeline | *Python, Pandas, SQL, Scikit-learn*

*Aug 2024 – Dec 2024*

- Built end-to-end analytical workflow from raw data extraction to model evaluation for calorie expenditure regression problem, simulating analytics engineer responsibilities for model enablement. [Github](#)
- Designed data preprocessing pipeline with feature scaling and PCA dimensionality reduction based on exploratory analysis of feature distributions and multicollinearity patterns.
- Evaluated multiple regression approaches using train/test methodology, comparing MSE, MAE, and  $R^2$  metrics to recommend best-fit model for production use case.

## TECHNICAL SKILLS

**Languages:** SQL, Python, C++, JavaScript, Typescript.

**Data & Analytics:** SQL, Snowflake, Databricks, Dbt, Pandas, Apache Spark, Power BI.

**Libraries:** Pandas, NumPy, Matplotlib, Scikit-learn.

**Developer Tools:** Git, GitHub, RestAPI, Apache Airflow, Excel, Vs Code, Jupyter Notebook, Aws(S3, IAM), Docker.