

Aerospace Business Analytics graduate with hands-on experience building predictive models, optimization models, and dashboards to solve aviation operations, pricing, and network problems. Proficient in Python (pandas, scikit-learn), SQL, R, Power BI, and linear programming (LINDO). Seeking Data Analyst, Operations Analyst, or Revenue Analyst roles in aviation.

SKILLS

Programming & Data: Python (pandas, scikit-learn), R, SQL, MATLAB

Analytics & Modeling: Machine Learning (Random Forest, Logistic Regression, SMOTE, SHAP), Regression & Econometrics (OLS, lagged/panel models, elasticity), Linear Programming & Optimization (LINDO), Statistical Analysis, Forecasting

Visualization & Tools: Power BI, Advanced Excel (Pivot Tables, VLOOKUP), Salesforce CRM, MS Office Suite

Domain Expertise: Aviation Operations Analytics, Revenue Management & Pricing (EMSR, overbooking, nested fare-class allocation), Route/Network Feasibility, Supply Chain Analytics, Financial/ROIC Analysis

EDUCATION:

Embry-Riddle Aeronautical University (ERAU),	Daytona Beach, FL
Masters in Aerospace Business Analytics	Dec 2025
Lakireddy Bali Reddy College of Engineering (LBRCE),	Mylavaram, India
Bachelor of Technology in Aerospace Engineering	May 2022

EXPERIENCE:

Embry-Riddle Aeronautical University	Daytona Beach, FL
Volunteer - Aerospace Operations & Data Analytics Research Assistant	Mar 2026 - present
- Developed and maintained a centralized aviation safety repository by collecting, organizing, and standardizing Air Traffic Control (ATC) communications, incident reports, transcripts, and operational documentation. - Processed, verified, and annotated ATC transcripts by creating verbatim and orthographic datasets for Automatic Speech Recognition (ASR), Natural Language Processing (NLP), and speech analytics applications. - Contributed to AI-driven aviation safety research by developing standardized data pipelines and high-quality datasets for event classification, safety analytics, and machine learning applications.	
Graduate Student Assistant, Admissions and Enrollment Management	Jul 2023 – Dec 2025
- Aided staff with reviewing transcripts and other admissions documents, creating transfer credit rules via Imaging. - Assisted students in completing their applications, contacting applicants through Salesforce CRM and Outlook. - Assisted the Project Manager in coordinating supply chain activities, including packing and shipping requested orders on schedule. - Conducted quality evaluation of damaged goods to determine usability and reduce operational waste.	
Graduate Teaching Assistant (Operations Research)	Aug 2024 – Dec 2024
- Graded and provided structured feedback to 25+ students, improving course engagement and comprehension - Guided learners in linear programming, simulation, and quantitative modelling practices.	
Info CAD Centre	Hyderabad, India
Design Operations Intern	Aug 2022 – Mar 2023
- Trained in 2D and 3D designs in AutoCAD and SolidWorks. - Drafted drawings of parts, sheet metal, surface, and assembly. - Assisted in Request for Information/Proposal/Quote Preparation.	

PROJECT EXPERIENCE:

Predicting Missed Passenger Connections — Machine Learning Model

[Machine Learning / Data Science] Tools: Python, scikit-learn, SMOTE, SHAP

- Built a Random Forest classifier on ~50,000 operational flight records across major U.S. hubs to predict missed passenger connections using only scheduling/operational variables (excluding weather).
- Applied SMOTE to correct severe class imbalance (<10% positive class) and used SHAP analysis to identify connection window and arrival delay as the top predictive drivers.
- Achieved 88.9% accuracy and 75% recall on the minority class, outperforming a logistic regression baseline — supporting proactive rebooking use cases.

Aircraft Turnaround Time Optimization

[Operations Research / Optimization] Tools: LINDO, Linear Programming

- Formulated a linear programming model to optimize crew and baggage-handler allocation across 5 aircraft types (A320, B737, A380, B747, A330) under resource constraints.

- Ran 10 optimization scenarios; the B737 most consistently achieved the best optimized turnaround times (82 min best), informing ground-resource allocation strategy.

U.S. Airline Fare Trends: Fuel, Inflation & GDP Analysis (2005–2024)

[Econometrics / Pricing & Revenue] Tools: Regression modelling (OLS, lagged, log-log elasticity)

- Built three econometric models (base OLS, lagged fuel pass-through, log-log elasticity) across ~400 quarterly observations for American, Delta, United, and JetBlue.
- Found GDP to be the strongest driver of fare growth and fuel cost pass-through to be lagged 1–2 quarters rather than immediate — informing pricing and fuel-hedging recommendations.

FedEx vs. UPS Cargo Network & Efficiency Analysis

[Network Analysis / BI Reporting] Tools: SQL, Python, Power BI

- Analysed global cargo network structure, fleet utilization, and route density for FedEx and UPS using SQL and Python, visualized through Power BI dashboards.
- Found UPS averaged ~52% higher revenue-ton-mile (RTM) efficiency per departure than FedEx, and quantified trade-war/tariff exposure differences between the two carriers.

Aviation Supply Chain Profitability Analysis

[Financial Analysis / BI Reporting] Tools: OLS Regression, Power BI

- Built an OLS regression model on 2014–2023 BTS/Diio data examining how fuel price, load factor, ancillary revenue, and COVID-19 shocks drive industry-wide airline net income.
- Built Power BI dashboards identifying ancillary revenue and load factor as the primary levers of airline profitability; recommended fuel-hedging and capacity-optimization strategies.

Route Feasibility Evaluation for a New Airline Market (Allegiant Air)

[Market/Route Analysis] Tools: Python, Excel

- Modelled demand, block time, and aircraft capability to assess feasibility of a new Allegiant Air route, including load factors, breakeven points, and competitive positioning.
- Projected a 76% unconstrained market share, but cost-per-available-seat-mile (CASM) economics showed the route was unprofitable — a data-driven recommendation against the launch.

LANGUAGES:

English (Fluent), Telugu (Native), Hindi (Fluent)