Isaac Tetzloff

Bedford, TX   765.414.3213   isaacbob@gmail.com   isaacbob.com   isaacbob   isaacbob

Accomplished data science and optimization leader with over a decade of experience delivering strategic, data-driven insights across complex operational environments, with a strong focus on collaboration, innovation, and people-centered leadership

EXPERIENCE

SOUTHWEST AIRLINES | Senior AI Consultant, Artificial Intelligence
Sep 2024 – Current | Dallas, TX

- Developing and executing enterprise strategies, business cases, and roadmaps to deploy and monitor machine learning and generative AI solutions, with an emphasis on accuracy and performance
- Leading complex data science and AI initiatives to deliver high-impact results and innovation, while aligning technology and business stakeholders
- Building strategic partnerships with leadership to drive AI adoption, align initiatives with organizational goals, and foster consensus among diverse stakeholders

AMERICAN AIRLINES | Manager, Safety Data Science
Apr 2022 – Jul 2024 | Fort Worth, TX

- Led a cross-functional team of data scientists, engineers, and analysts to modernize safety data analysis, generating new insights from safety data and advancing safety in the digital age
- Applied advanced machine learning techniques, including natural language processing, large language models, and predictive modeling, to derive actionable insights from safety data
- Designed and implemented dashboards, reports, data models, and statistical analyses to provide actionable, data-driven findings, enabling measurement and evaluation of safety KPIs and initiatives
- Developed a unified data strategy to integrate safety data sources, improving accessibility across safety and business units for better decision-making

AMERICAN AIRLINES | Senior Consultant, Operations Research & Advanced Analytics
Feb 2015 – Apr 2022 | Fort Worth, TX

- Engineered and deployed a machine learning model that doubled departure time accuracy by predicting aircraft turn times more effectively
- Formulated the mathematical model and developed the optimization engine to process pilot bids and reserve assignments, balancing pilot preferences with contractual obligations to maximize open sequence coverage
- Developed an automated pipeline with Azure, Power Platform, and Databricks to process flight training data, delivering real-time feedback to instructors
- Contributed to workload simulation models for dispatchers and load planners, enabling "what-if" scenario analysis for workforce planning and budgeting
- Created a data model and live dashboard integrating operational, revenue, and cargo data providing critical insights for tactical cancellation decisions
- Designed a heuristic-based optimization model to assign pilots and instructors to simulators, improving efficiency in recurrent training

PURDUE UNIVERSITY | Graduate Research Assistant, Aeronautics and Astronautics
Aug 2007 – Jan 2015 | West Lafayette, IN

- Developed the Fleet Level Environment Evaluation Tool (FLEET) to assess the impact of future aircraft on fleet-level emissions using a mixed-integer linear programming formulation based on resource allocation and fleet assignment

EDUCATION

PURDUE UNIVERSITY
DOCTOR OF PHILOSOPHY (ABD)
AERONAUTICS AND ASTRONAUTICS
May 2010 – Jan 2015 (Incomplete / ABD)

MASTER OF SCIENCE
INDUSTRIAL ENGINEERING
May 2010 – May 2013

MASTER OF SCIENCE
AERONAUTICS AND ASTRONAUTICS
Aug 2007 – May 2010

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
BACHELOR OF SCIENCE
AEROSPACE ENGINEERING WITH INFORMATION TECHNOLOGY
Sep 2003 – Jun 2007

BACHELOR OF SCIENCE
MANAGEMENT SCIENCE
Sep 2003 – Jun 2007

SKILLS

PROGRAMMING

Proficient:
Python • SQL • Java

Experienced:
SAS • MATLAB • LaTeX

Familiar:
R • HTML • JavaScript

TOOLS / PLATFORMS

AWS • Azure • Tableau • Databricks • FICO Xpress • Gurobi Optimizer • Snowflake • Cognos Analytics • Alteryx • Power BI • think-cell • MS Office