Isaac J. Tetzloff

940 Purcell Dr
Plano, TX 75025
765.414.3213
isaacbob@gmail.com
isaacbob
isaacbob

Experience

American Airlines – Fort Worth, TX

Consultant, Operations Research & Advanced Analytics **02/2015 - Present**

- Working to create a machine learning model to better predict flights that will encounter a flight service delay, allowing for improved utilization of ramp and flight service managers to assist in the boarding process and reduce delays
- Analyze the impacts of policy changes to posting and updating delays to departure times through data driven analysis and creation of various metrics to evaluate performance of different hub and gateway airports as well as regional carrier partners
- Create Tableau dashboards used by multiple airports and business units to provide information including gate changes, spare crew staffing, airport congestion, and gate check bags
- Assist in the development of simulation models and analyses for flight dispatchers and terminal bag room operations to perform a variety of what-if scenarios for planning and policy creation
- Developed and maintain the optimization engine for Daily Open Time Coverage/Reserve Assignment System (DOTC/RAS), ensuring the optimal solution maintains contractual obligations while optimizing pilot preferences
- Constructed an application used by customer service managers at airports to detect schedule changes based on equipment, flight number, departure time or frequency to assist in pier assignments in the baggage handling systems
- Perform many ad hoc analyses and tool development for a variety of airports and business units to help understand and solve problems including gate check bag analysis, predicting aircraft turn times, baggage pier assignments, predicted taxi times, and assignment of crews for recurrent training

Purdue University – West Lafayette, IN

Graduate Research Assistant, School of Aeronautics and Astronautics **08/2007 - 01/2015**

- Developed Fleet Level Environment Evaluation Tool (FLEET) to assess the impact of current and future aircraft on fleet-level emissions using mixed integer linear programming based on resource allocation and fleet assignment problems
- Expanded original FLEET model to handle additional airports, aircraft models, airlines and objectives
- Examined impact of future supersonic aircraft on fleet-level emissions and productivity
- Awarded the NASA Graduate Student Researchers Project (GSRP) and the Purdue Forever Fellowships

Instructor, School of Engineering Education **01/2013 - 06/2014**

- Served as instructor for ENGR 132 Transforming Ideas to Innovation II, one of two core courses in Purdue's First Year Engineering Program
- Developed course material and curriculum for solving complex problems from formulation to implementation in a team-based environment using Excel and MATLAB
- Awarded the Estus H. and Vashti L. Magoon Award for Graduate Student Instructors
- Earned an Advanced Graduate Teaching Certificate from the Purdue Center for Instructional Excellence

Education

Purdue University – West Lafayette, IN

Doctor of Philosophy, Aeronautics and Astronautics **05/2010 - Present**

- PhD research being completed in absentia, anticipated completion 12/2019

Master of Science, Industrial Engineering **05/2010 - 05/2013**

Master of Science, Aeronautics and Astronautics **08/2007 - 05/2010**

Massachusetts Institute of Technology – Cambridge, MA

Bachelor of Science, Aerospace Engineering with Information Technology **09/2003 - 06/2007**

Bachelor of Science, Management Science **09/2003 - 06/2007**

Technical Skills

Advanced: Java, LaTeX, MATLAB, Microsoft Office, SAS, SQL, Tableau

Intermediate: Gurobi, Python, R, Simio, Simulink, Xpress