MICHAEL TRICANOWICZ

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About Me

Senior engineer with expert technical knowledge and extensive project management experience pursuing a new career in data science and analytics. Bringing a proven track record as a detail-oriented problem solver delivering effective results, I am consistently trusted to make judgments that ensure the reliability of highly complex systems and operations. Comfortable interacting with diverse teams to ensure the highest levels of quality and compliance while achieving business goals.

Education

University of North Carolina at Charlotte
Master of Science, Data Science & Business Analytics (expected December 2025)
Rensselaer Polytechnic Institute
Bachelor of Science, Aeronautical and Mechanical Engineering (May 2011)

Skills & Courses

- Highly proficient with Excel, Python, SQL, Power BI, and Tableau.
- Expert knowledge of structural design and repair procedures and classical stress analysis methods.
- Comprehensive knowledge of the CFR. Able to effectively navigate the regulatory system.
- Relevant coursework: ML, SQL and database systems, information retrieval, visual analytics, business analytics

Projects

Traffic Impact Predictor (Link)

- Developed a machine learning model to predict how severe the traffic impact will be due to an accident plus an accompanying app designed to accept a user's location input and generate a prediction. Model development was coded with Python using statistical libraries like pandas, sci-kit learn, and XGBoost.

Airline Financial Metrics Comparison (Link)

- Developed a dashboard that enables quick and intuitive comparisons of the financial performance of major US commercial airlines by visualizing data sourced or calculated from SEC filings. Deployed via Azure App Service.

Work Experience

American Airlines
Senior Engineer (2017 – Present) | Engineer III (2012-2017) | Engineer II (2011-2012)

- Act as onsite engineering subject matter expert for aircraft maintenance at facilities across the United States and abroad. Responsibilities include managing and delegating engineering workload among AA and vendor engineers, coordinating engineering responsibilities with other departments, and communicating progress to leadership to ensure cross-functional collaboration.
- Design repairs to address structural damage to the aircraft, develop instructions for troubleshooting, and translate data into instructions for our maintenance team to realize cost savings by avoiding out of service time and part replacements. Cost savings range from a few thousand dollars for one off repairs to hundreds of thousands of dollars for fleetwide solutions addressing systemic issues.
- Developed a custom tool in Excel using formulas, logic, and VBA to analyze dent damage against acceptance criteria to streamline evaluation after a major hail event affecting over 200 aircraft. Reduced processing time from over a week to 3 days per aircraft which directly translated to reduced out of service time and prevented lost revenue of over $20,000 per aircraft.
- Develop and deliver presentations for annual supplier business reviews conducted with airline and MRO leadership teams to highlight the data, metrics, and trends affecting engineering support of the operation.
- Developed a tool to predict needed engineering headcount based on historical support trends, workload, and locations considering existing headcount and anticipated training and PTO needs.
- Acts as a group leader by reviewing and approving engineering deliverables and coaching junior engineers.
- 2015 Chairman's Award recipient, AA's highest employee honor, which is awarded to up to 100 employees each year for exceptional accomplishments positively impacting the airline.