



Operations Research & Advanced Analytics Group

Multiple Openings from Sr. Analyst to Manager

The Operations Research (OR) Group at Amtrak provides advanced analytics, business optimization and consulting services to various internal business lines with the goal of achieving cost savings, revenue enhancements and/or business process improvement.

ESSENTIAL FUNCTIONS:

- Interfaces and collaborates with other internal teams to understand the business and technology/data aspects in order to identify appropriate opportunities and initiate new projects for business improvement using optimization, simulation, forecasting and other advanced analytics techniques.
- Develops and implements data-driven workable solutions, analyses and decision support tools that align with business customers' goals.
- Works with business partners and end-users to validate and improve results, and clearly communicates and coordinates the efforts with management and stakeholders.
- Keeps current with research, technology and the industry trend. Trains and positively influences others within Amtrak on analytics, new tools and advanced techniques.

QUALIFICATIONS:

- Advanced analytics degree (Master's or PhD) in Operations Research, Data Science, Industrial Engineering, Operations Management or a related field.
- Practical experience applying quantitative techniques to solve real-world problems. Ability to identify underlying problems and appropriate techniques for solving them.
- Expertise and hands-on working experience in at least one area as described below:
 - o **Mathematical Optimization:** Uses commercial or open-source optimization packages such as Gurobi, CPLEX, Xpress, COIN-OR, and develops and deploys object-oriented programs (Java, C++, C#, etc.)
 - o **Data Mining/Advanced Analytics:** Analyzes large-volume data sets and builds statistical models to obtain insights and drive improvement changes using tools such as R, SAS, Python, SQL, Tableau.
 - o **Computer Simulation:** Develops computer simulation models (discrete event, agent-based) to analyze various business settings and scenarios. Familiar with simulation tools such as AnyLogic, Simio, Arena.
- Strong project management skills and demonstrated ability to lead through complex projects.
- Demonstrated experience in successfully collaborating with a cross-section of departments and customers.
- Effective interpersonal communication skills including writing, presentation, meeting and interview facilitation.
- Leadership and conflict resolution skills with a proven ability to motivate others and foster change.
- Prefers past experience in railroads, airlines or the general transportation/travel industry.

Office Location: Washington DC, Headquarters

Relocation Assistance will be considered.

Send resume to Shane.Wu@amtrak.com