Rohan Devraj

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Education

Georgia Institute of Technology | Atlanta, GA *Expected Graduation: May 2026*
B.S. in Industrial & Systems Engineering, Minor in Computer Science *GPA: 3.91*

Skills & Relevant Coursework

Technical: Python (Pandas, NumPy, Pyomo), SQL, Java, R (ggplot2, dplyr), Gurobi, Excel
Coursework: Probability, Statistics, Data Input/Manipulation, Linear Algebra, Discrete Mathematics, Object-Oriented Programming, Data Structures & Algorithms, Stochastic Systems, Database Systems, Engineering Optimization

Experience

Georgia Tech Space Systems Optimization Group Aug. 2024 – present
Undergraduate Researcher *Atlanta, GA*

- Formulated and implemented a Mixed-Integer Linear Programming (MILP) model using Python and Gurobi for Mars rover routing, optimizing traversal costs under elevation-based terrain constraints, providing actionable insights into mission planning and decision making (advised by Dr. Koki Ho)
- Extracted model results and used Matplotlib to overlay optimized paths on high-resolution elevation maps for detailed analysis of terrain interactions
- Explored the integration of reinforcement learning techniques to enhance the MILP model, aiming to improve routing adaptability in stochastic and dynamic terrain scenarios to enhance the future of space exploration

Optum, Carnegie Mellon Department of Statistics & Data Science Jun. 2024 – Aug. 2024
Data Science Intern | stat.cmu.edu/cmsac/sure/2024/showcase/ *Pittsburgh, PA*

- Selected as one of 18 individuals in the nation for competitive research program on statistical and data science methodologies involving data visualization and machine learning algorithms for real-world healthcare challenges (CMU-Optum Bridges to Healthcare Data Science SURE 2024)
- Performed analysis on county-level health data using regression models (linear, lasso, ridge) and decision trees, implementing 10-fold cross-validation for model selection and hyperparameter tuning in R
- Conducted 10+ analyses of maternal healthcare disparities and used k-means clustering to identify distinct groups in healthcare access using over 9,800 birth records
- Delivered presentation to faculty at Carnegie Mellon University and leaders at UnitedHealth Group

Georgia Tech Autonomous & Connected Transportation Laboratory Jan. 2024 – May. 2024
Undergraduate Research Assistant *Atlanta, GA*

- Used optimization tools like Gurobi (and other related Python libraries) to develop sustainable travel solutions
- Formulated and implemented equity-based constraints in transportation models, ensuring accessibility to jobs and education across spatially diverse zones
- Integrated quantitative safety measures by considering the likelihood and severity of accidents during travel between zones enabling data-driven safety enhancements

Leadership & Organizations

Georgia Tech Angel Network | *Associate* | *gtangelnetwork.com* 2024 – present

- Serve as one of 10 student associates in a highly selective, student-run organization supporting Georgia Tech-affiliated startups
- Lead meetings with founders and draft the creation of detailed, insightful investment memos for a network of prominent angel investors, synthesizing key aspects of startups' product, market strategy, financial performance, and growth potential
- Source over 15 potential deals, identifying and assessing promising startups for the angel investment network

180 Degrees Consulting | *Consultant* 2024 – present

- Collaboratively develop and implement a strategy to help the non-profit organization MedShare to provide support to Charitable Health Clinics (CHCs) of the Fulton and Dekalb counties of Georgia
- Conduct in-depth data analysis of MedShare's operations and communicate with directors at CHCs and other non-profits