

SOHOM CHATTERJEE

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Interested in applications of large-scale optimization problems in industry, specifically supply chain and logistics

EDUCATION

Texas A&M University, College Station

Sep 2019 - May 2024

Doctoral Student, Industrial Engineering (Operations Research Track)

GPA: 3.9 / 4.0

Relevant Coursework: Engineering Data Analytics, Stochastic Processes, Non-Linear and Dynamic Programming, Integer Programming, Optimization over Networks, Analysis of Algorithms, Distribution Theory

National Institute of Technology, Durgapur

Sep 2013 - May 2017

Bachelor of Technology, Mechanical Engineering

TECHNICAL SKILLS

Programming, Data Analysis & Visualization

Python, SQL, Apache Spark SQL, Tableau, R, C++, Excel (VBA)

Optimization Packages

Gurobi, AMPL, CPLEX, FICO Xpress, Excel Solver

Simulation

Simio

PROJECTS

Optimizing Texas A&M Counseling and Psychiatry Services Counsellor Scheduling System (Submitted)

-Simulating current scheduling system for 30 counselors and demand of 4000 students per semester using Simio

-Developing optimal dynamic scheduling policies for counselors to minimize waiting time for patients

A Collaborative Network-based Model for Sustainability of Rural Hospitals (Submitted)

-Proposed optimization-based mathematical model using THIC Data to identify potential collaboration plans, solved in Python and Gurobi

-Designed interactive what-if scenario analyzer using Tableau

TAMUHack 2020 StateFarm Challenge- Accident Risk Prediction: US Accidents (3.0 million records) (Kaggle)

-Implemented Random Forest prediction algorithm in Python that could predict accident severity upto 91.2% accuracy and developed website for demonstrating using Flask, presented visualizations using Tableau and matplotlib.

TAMU Datathon 2020 CapitalOne Challenge-Default Prediction for Small Businesses during COVID-19

-Built a regression-based machine-learning model for banks to decide whether loan-requests by small businesses should be approved or not, based on their probability of defaulting

WORK EXPERIENCE

BNSF Railway Company *Intern-Fellow, Operations Research*

May 2022 - Present

Project: Locomotive Utilization Decision Support Development of decision support tool for forecasting, simulating and optimizing flow of trains and locomotives across time-space railway network (using FICO Xpress)

ACHIEVEMENTS

- Awarded the Dept. of Industrial and Systems Engineering 'Outstanding Master of Science Student' Award by the College of Engineering at Texas A&M University in December 2020
- Awarded the Dept. of Industrial and Systems Engineering Scholarship by Dwight Look College of Engineering at Texas A&M University in March 2020
- Won 2nd Prize in TAMUHack 2020 Hackathon for "Traffic Accident Risk Prediction using US Accidents Dataset", as a part of the StateFarm Challenge in January 2020
- Won 3rd Prize in TAMU Datathon 2020 for "Default Prediction for Small Businesses during COVID-19", as a part of the CapitalOne Challenge in October 2020