AMOGH BHOSEKAR

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EDUCATION

Clemson University, Clemson, SC *2018 - Dec 2021*
Doctor of Philosophy, Industrial Engineering (Expected graduation: Dec 2021) Overall GPA: 3.61

Graduate Level Coursework: Advanced Methods of OR, Advanced Probabilistic Methods, Introduction to Stochastic Models, Discrete Optimization, Data Structures, Mathematical Programming, Design and Analysis of Algorithms, Advanced Mathematical Optimization Models, Transportation/Logistic Engineering, Introduction to Statistical Computing, Engineering Economics, Engineering Optimization and Applications, Modeling Systems Under Risk, Statistical Methods, Python Machine Learning Applications

Clemson University, Clemson, SC *2015 - 2017*
Master of Science, Industrial Engineering Overall GPA: 3.63

University of Mumbai, Mumbai, India *2011 - 2015*
Bachelor of Science, Production Engineering Overall GPA: 3.7

OBJECTIVE

Looking for an internship position in the area of operations research,optimization, and data science.

TECHNICAL SKILLS

Programming Languages	Python, Julia, VBA , Java (basic), C++ (Basic)
Operations Research	AMPL, Julia, Python, Gurobi, Arena Simulation
Statistics and Database Management	R(basic), SQL, Python (pandas), JMP, Minitab

WORK EXPERIENCE

Research Assistant, Clemson University *August 2017 - Present*
Projects:

- *"Simulation-Optimization of the Material Handling in a Health Care Facility."*
  Technical Skills: Arena Simulation, JMP Statistical Software
  The purpose of this project is to emphasize how to determine the fleet size of Automated Guided Vehicles (AGV) to meet the material demand in a hospital.

- *"A Discrete Event Simulation Model for Integrating Inventory Management and Material Handling in Hospitals."*
  Technical Skills: Arena Simulation, JMP Statistical Software
  A discrete event simulation model (DES) is developed to model the material handling and instrument inventory management processes. Factors are determined that minimize the travel time of resource carrier and level of inventory via simulation optimization experiments.

- *"A deterministic model for surgery scheduling problem with Resource Constraints."*
  Technical Skills: Python, Gurobi, JMP Statistical Software
  A mixed integer programming model is proposed to find the schedule of surgeries in OR and resource allocation that minimizes cost of schedule and cost of resource inventory.

Teaching Assistant, Clemson University *Jan 2018 - Present*

- Responsibilities: Teaching collaboration with course instructor. Grading Homework, quizzes and exams. Helping students in office hours.

- Transportation and Logistics Engineering - IE 6570
- Production Planning and Control - IE 3860
- Production Planning and Control - IE 3860

Production Assembly Intern, ZF Transmissions *Jan 2017 - August 2017*
Responsibilities

- Apply quality problem solving tools, productivity improvement, shift allocation
  Technical Skills: Python, Microsoft Excel - VBA

Engineering Intern, Be Green Packaging *May 2016 - August 2016*
Responsibilities

- Apply quality problem solving tools, inventory management project
  Technical Skills: Microsoft Access - VBA, Minitab

ACADEMIC ACHIEVEMENTS

Best Student Paper Award at 2018 IISE Annual Healthcare Systems Track *May 2018*

AFFILIATIONS

Treasurer of INFORMS Student Chapter of Clemson University since 2017

Member of the Institute of Industrial Engineers (IISE) and INFORMS since 2017

PUBLICATIONS

Bhosekar A.S., Gilstrap K., Isik T., Eksioglu S.D., Allen R., "Simulation Optimization of Automated Guided Vehicle System in a Health Care Facility." 2018 IISE Annual Conference Proceedings

Bhosekar A.S., Isik T., Eksioglu S.D., Allen R., "Simulation Optimization of Integrated Inventory and Material Handling System." 2019 IISE Annual Conference Proceedings

Bhosekar A.S., Isik T., Eksioglu S.D., "A deterministic model for surgery scheduling problem with Resource Constraints" 2020 IISE Annual Conference Proceedings - *Submitted*

Two journal papers based on the research work - *Submitted*

PRESENTATIONS AND TALKS

Oral Presentation - Simulation Optimization of Automated Guided Vehicle System in a Health Care Facility, IISE 2018 Annual Conference

Oral Presentation - Inventory Reduction of Surgical Instruments Using Just-In-Time Delivery, 2019 Healthcare Systems Process Improvement Conference

Oral Presentation - Simulation Optimization of Integrated Inventory and Material Handling System,IISE 2019 Annual Conference

ACADEMIC PROJECTS

Dijkstra's Algorithm
This project aims to apply data structures to develop Dijkstra's Algorithm for shortest path.
Data Structures: Dictionaries, List and Minimum Priority Queue were used in Python language

Puzzles in MIP
This project aims to apply the modeling techniques to formulate MIP puzzles such as Sudoku and Cruci-pixel games.
Tools: AMPL, Gurobi