

## EDUCATION

North Carolina State University Raleigh, NC  
Ph.D. Operations Research May 2022  
*Dissertation: "Optimization and Matching Theory"*  
M.S. Operations Research May 2021  
B.S. Industrial & Systems Engineering May 2018  
*Minor in Materials Science Engineering*

## TECHNICAL SKILLS

Python, Gurobi, R, R-Shiny, C++, SQL, Tableau

## EXPERIENCE

### U.S. Army, The Research and Analysis Center (TRAC)

*Operations Research Analyst (Civilian) May 2021 - Present*

- Built in-house linear programming solver based in R-Shiny for 'drag and drop' functionality. Currently in use.
- Designed for analysts with limited programming experience.
- Pre-formulated "paradigms" simplified user experience by allowing users to upload only the most relevant aspects of formulation.

### Tesla Motors, Inc.

Reno, NV

*Industrial Engineer (Intern) August 2017 – December 2017*

- Designed a full-scale production assembly process from prototype assembly with Lean Manufacturing principles (bridge solution was used for months).
- Developed a machine-availability data collection, calculation, and reporting system (using SQL & Tableau).
- Worked cross-functionally within a highly matrixed organization to secure necessary information and resources from disparate teams.

### Hanesbrands, Inc.

Winston-Salem, NC

*Logistics Engineer (Intern) June 2017 – August 2017*

- Developed forecasting strategy and tool for internal logistics resource allocation.
- Implemented, trained to, and planned sustaining efforts for technical forecasting tool.
- Managed communication across parallel teams to coordinate production and logistics planning

## AREAS OF EXPERTISE

- Linear & Combinatorial **Optimization** (Gurobi); modeling, theory, application
  - **Simulation** & Complex Computation (Python, R)
  - **Statistical Learning** using Inference, Time Series Analysis, Regression, & Design of Experiments
  - Microeconomics **Matching Theory** & Mechanism Design
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## PAST PROJECTS

Automated Video Analysis

*Time Studies using Computer Vision, Lean Manufacturing Spaghetti Diagrams using Object Tracking, Path Differentiation, Clustering Methods*

Peripheral Machine Sensing

*State Sensing (IOT Manufacturing) with Arduino, C++, Time Series Analysis*

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## AWARDS

Science, Mathematics, and Research for Transformation (SMART) Scholarship

*August 2019 – May 2021*

Dean's Fellowship

*August 2018 – May 2019*