Justin Rist

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EDUCATION

The Pennsylvania State University, College of Engineering
Ph.D. Candidate in Industrial and Manufacturing Engineering   Expected August 2024
Dual Title in Operations Research
- Advisor – Dr. Paul Griffin, Professor of Industrial and Manufacturing Engineering
- Co-Advisor – Dr. Joel Segel, Associate Professor of Health Policy and Administration

The Pennsylvania State University, College of Engineering
MS, Industrial and Manufacturing Engineering   August 2022
- GPA – 3.83/4.00
- Paper Title: "Evaluating Medicare Dental Coverage Expansion Alternatives"
- Advisor – Dr. Paul Griffin, Professor of Industrial and Manufacturing Engineering

Auburn University, Samuel Ginn College of Engineering
BISE, Industrial and Systems Engineering   May 2020
- GPA – 3.98/4.00
- Minor – Business
- Honors Scholar

RELEVANT EXPERIENCE

The Pennsylvania State University, IME Department
Teaching Assistant – State College, PA   Aug 2020 – May 2022
- Taught multiple lab sections for IE 453: Simulation Modeling for Decision Support Course
- Led lecture planning, assessment creation, and grading for IE 460: Service Systems Engineering Course with 120 Industrial Engineering students per semester

GE Appliances, A Haier Company
Materials Process Improvement Contractor – Decatur, AL   Aug 2019 – May 2020
- Developed heuristics used to adjust production schedules for material ordering purposes, enabling the automation of additional ordering processes
- Automated material ordering processes to eliminate one hour of salaried labor per day and increase order accuracy and arrival dependability

Auburn University, Office of Innovation Advancement and Commercialization
Commercialization Intern – Auburn, AL   May – Aug 2019
- Conducted five prior art searches on Auburn technologies to verify patentability
- Contacted 30 companies seeking licensing agreements for patented Auburn technologies, including establishing a relationship with a business currently in licensing negotiation with the university

GE Appliances, A Haier Company
Shop Floor Quality Co-op – Decatur, AL   Jan – May 2019
- Automated plant scrap, yield, and damage reports to improve consistency of information for plant leadership, enabling more informed plant operations decision making
- Created gauges and procedures to increase quality of product, leading to improved yield metrics and decreased scrap expense

Materials Flow Co-op – Decatur, AL   May – Aug 2018
- Consolidation of multiple fork truck jobs by redesigning part packing layouts to increase bin part storage capacity by 75% for certain high-volume parts
- Automated material ordering processes to eliminate 1.5 hours of salaried labor per day and increase order accuracy and arrival dependability

Sourcing Digitization Co-op – Louisville, KY   Aug – Dec 2017

- Developed sourcing reports to provide accurate information for buyers to make informed purchases and more accurately determine future budgets
- Created supplier training videos used by over 300 suppliers to streamline the training process and promote proper fulfillment procedure

PROJECTS AND RESEARCH

Evaluating Medicare Dental Coverage Expansion Alternatives
Project in Collaboration with the Center for Disease Control   In Progress
- Analyzed different Medicare Dental Expansion plans to recommend best plan given evaluation criteria
- Created logistic regression model for application to US Census and Medical Expenditure Panel Survey Datasets to estimate dental supply and demand of alternative plans
- Formulated mixed-integer linear programming model for cost-effectiveness analysis of proposed dental allocation program

COVID-19 Protocol Implementation Science for Central PA Congregations
Project in Collaboration with PSU Human Factors and Sociology Faculty   In Progress
- Surveyed 14 congregations in central PA on response to COVID-19 pandemic
- Provided individualized COVID-19 protocol recommendations guided by agent-based model simulating COVID-19 transmission in a religious service
- Followed-up with congregations to understand how religious organizations respond to scientific recommendations
- Funding provided by PSU Social Science Research Institute

SIMIO Student Competition and Conference Presentation
Competition Entry with Teammate Robert Newton   Spring 2021
Presentation at Simio Sync 2021 Conference   September 30, 2021
- 1st place in discrete event simulation competition hosted by SIMIO LLC with 339 team entries from 16 countries
- Project tasked teams with recommending an inventory policy for shelving factory
- Full details of competition and team entry can be found at:
  https://www.simio.com/academics/student-competition/May2021/contest-overview.php

Modeling Animal Migration Routes using Machine Learning
Final Project for EDSGN 561 with Teammates Christine Cummings and Junyan Tian   Spring 2021
- Utilized historic animal migration and weather dataset to train neural network model
- Utilized model to estimate changes in migration routes due to climate change
- Full details of project can be found at: https://jsrist0028.github.io/animalmigration/website/

SKILLS

Programming – Python, R, Visual Basic, MATLAB
Simulation – SIMIO
Microsoft Office Suite – Extensive macro creation using Visual Basic for Applications

AWARDS

Prevention and Methodology Training Program Fellow	2022 – 2024
SIMIO Student Competition Winner	May 2021
PSU IME Department Teaching Assistant of the Year Runner-up	May 2021
Metal Treatment Institute Educational Foundation Scholarship	2019, 2021
SIMIO Student Competition Honorable Mention: Best Project Video	May 2020
Joe W. Forehand (Former Accenture CEO) Endowment Leadership Scholarship	2017 – 2020
Auburn University Presidential Scholarship	2015 – 2020
Auburn University Dean's List	2015 – 2020