COOPER MCGUIRE

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PROFESSIONAL SUMMARY

Talented, technical, and analytical employee effective at multi-tasking and maintaining a friendly attitude under pressure. Efficiently builds loyalty and long-term relationships with clients while consistently achieving organizational and individual goals. Detail oriented and highly organized. Looking for an opportunity to contribute in a collaborative work environment.

SKILLS

- Java
- Python
- R
- SQL
- Tableau
- Gurobi
- Access Database
- Git
- GCAM, NGTS

EDUCATION

Cornell Tech Master of Engineering in Operations Research and Information Engineering — Anticipated May 2023

Cornell University Bachelor of Engineering in Operations Research and Information Engineering — May 2022
Minor in Dyson School of Applied Economics and Management

WORK EXPERIENCE

Systems & Technology Research / Boston, MA — Summer 2022
Cyber Physical Systems Intern (DoD Secret Clearance) Algorithm development for a cognitive electronic warfare product for Dept. of Defense clients. Incorporating optimization, graphical network modelling, machine learning, and artificial intelligence into planning and operations tools. Implementation of various path-planning approaches in the aerial domain.

Systems Planning and Analysis / Alexandria, VA — Summer 2021
Operations Research Analyst Intern (DoD Secret Clearance) Part of Cross Domain Warfare Analysis Group supporting the Defense Advanced Research Projects Agency (DARPA). Developed a stochastic modeling-based means to incorporate a range of threats and constraints to Navy vessels at the theater level. Integer programming approach for risk management, incorporating attribution of risk based on a variety of dynamic factors and environments.

Cornell University / Ithaca, NY — Spring 2021-22
Teaching Assistant Mentoring, holding office hours, and grading of undergraduate sophomores and juniors in major-required coursework. Coursework focused on SQL, Python data science packages, and Tableau visualization.
University Hearing and Review Panel Member Appointed to joint faculty/student/staff panel as member to hear, judge, and conclude upon responses to on-campus infractions of the student code of conduct.

U.S. Senate Committee on the Budget / Washington, DC — Summer 2020
Summer Committee Intern Organized, operated, and prepared committee hearings. Wrote analytical hearing background memos pertaining to future budget challenges, including taxation for electric and automated vehicles and consolidation of over 65 federal housing assistance programs.

TECHNICAL EXPERIENCE

- Algorithm Development
- Path-planning Algorithms
- Stochastic Modeling & Simulation
- Systems Engineering approaches
- Object Oriented Programming Data Structures
- Probability and Statistics
- Regression techniques
- Network algorithms and modeling
- Machine Learning Implementations

Faculty Research Projects:

- **General Motors Consulting**- Modeling competitive pricing behavior in both national and regional markets. Leveraging game theory concepts to recommended differentiation avenues and pricing strategy change indicators.
- **Social Justice Mathematics and Data Analysis**- Published a mini-textbook (60 pg) on the decision sciences for 4000 inmates in prisons nationwide. Topics included voting theory, apportionment, and gerrymandering. Honorable Mention for Undergraduate Presentation at Joint Math Meetings 2020, "Winning with Math: An Introduction to Social Choice for Prison Inmates". Analyzed survey data gathered from inmates on effectiveness of Cornell's prison education system.
- **Hawkes-dictated demand applied to Economic Order Quantities**- Publishing paper exploring how self-exciting demand affects an inventory reorder quantity (EOQ). Developing a simulation to determine the optimal EOQ, modelling Hawkes processes on challenges universal to industry.