ARTHUR (AJ) LIBERATORE

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EDUCATION:

Wentworth Institute of Technology, Boston, MA — Graduation: August 2021

- Bachelor of Science in Applied Mathematics
- Minor in Data Science
- GPA: 3.92 / 4.00

RELEVANT COURSES:

Numerical Analysis I/II, Data Science Fundamentals, Industrial Problems in Applied Math, Advanced Statistics, Partial Differential Equations, Computer Science I/II, Operations Research, Data Visualization, Machine Learning

SKILLS:

Languages: Java, R, LaTeX, MATLAB, SQL, Python 3
Software: MS Excel, MS PowerPoint, MS Outlook, GitHub, Adobe Illustrator, Adobe Premiere, Gephi, Tableau

RELEVANT EXPERIENCE:

Research Analysis Intern at Process First, Boston, MA — August 2020 – Present

- Reduce food insecurity in New England by optimizing food bank infrastructure
- Investigate and simulate economic impact of solutions with utilization of input-output analysis
- Engineer data-driven solutions, giving farmers direct access to demand data

Embedded Tutor and Peer Tutor at Wentworth — September 2019 – Present

- Lead group study sessions with 20-40 attendees to help struggling students understand material and prepare for exams
- Tutor peers one-on-one to improve study habits and skills in a variety of mathematical subjects
- Respond to questions as a Teaching Assistant for a section of Engineering Calculus I

PROJECTS:

US Senate Committees Tableau Story — October 2020 – December 2020

- Addressed the issue of diversity in Senate committees, utilizing the story feature in Tableau
- Created an interactive dashboard, allowing users to see the geographic, partisan, gender, and racial demographics of chosen committees
- Cleaned and entered committee membership data with Python, and created a Gephi network graph of Senators shared among committees

PCA Dimensionality Reduction and Image Recognition — December 2020

- Analyzed the effects of Principal Component Analysis dimensionality reduction on computation time, accuracy, and variance for a Neural Network handwritten digit classifier
- Achieved 96% accuracy in prediction with 12% of total components and a computation time of 18 s, compared to the same accuracy for using the original images with a computation time of 64 s

IntelyCare Industrial Problem — January 2020 – May 2020

- Collaborated with 2 peers to formulate a mathematical solution for a problem in the industry using R to apply machine learning algorithms to predict retention rates with up to 86% accuracy
- Wrote a professional research report in LaTeX and created a presentation with PowerPoint
- Practiced professional standards of communication and worked effectively in a team environment

ACTIVITIES:

Math Club / Society for Industrial and Applied Mathematics — September 2018 - Present

- Complete monthly challenges, attend seminars, and discuss mathematics

INTERESTS:

Personal Training and Fitness, Printmaking, Portraiture, Gardening, Math Challenges, Independent Studying