

TARA DONOHUE

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EDUCATION

Tufts University

Bachelor of Science in Mechanical Engineering

GPA: 3.31, Dean's List

Medford, MA

Expected May 2023

PROJECTS

Robot, *Electromechanical Systems and Robotics*

December 2021

- Created and piloted robot that navigated through an academic building, took the elevator to reach its destination
- Coded a control system in Python that allows users to operate the robot
- Set up electronic components using Raspberry Pi and basic circuits

COVID-19 Analysis, *Data Science in Biotechnology*

May 2021

- Used web scraping to acquire large-scale data sets on COVID-19 cases
- Analyzed COVID-19 dashboards with Python to find trends over time throughout United States
- Performed exploratory data analysis, data visualization with Tableau, and feature engineering to interpret data

Decision Tree Classifier, *Introduction to Computing in Engineering*

May 2020

- Coded a decision tree classifier that used machine learning to sort a dataset with a 99% accuracy rate
- Analyzed results to interpret effectiveness of the classifier and presented findings to class

EXPERIENCE

Tufts University Center for Engineering Education and Outreach

Medford, MA

Outreach Learning Fellow

October 2021 - Present

- Create and teach engineering curricula to after-school program students aged 9-12

Research Intern

May - August 2020

- Analyzed classroom data for Role Models in Engineering Education research project to find out how to effectively teach young children about engineering
- Coded and assembled qualitative and quantitative data from research to find trends

Firm Prospects

Remote

Data Engineer Intern

June - August 2021

- Identified trends and patterns in data sets and defined new data collection and analysis processes
- Set up large scale web scraping infrastructure during creation of new company pipeline
- Implemented data cleaning and validation scripts using Python
- Applied machine learning knowledge using methods such as natural language processing to process legal industry data

IBM Accelerate

Remote

Apprentice

June - August 2021

- Learned from IBM experts about hardware/firmware development, product engineering, supply chain engineering, and quantum computing and how to apply these skills

VOLUNTEER EXPERIENCE

Boston CASA

Remote

Computer Science Instructor

July 2020 - January 2021

- Taught Python to children in the foster care system

Techquity, Tufts University

Medford, MA

Member

January - May 2020

- Created a curriculum with the South End Technology Center to teach high school students about machine learning

EXTRACURRICULAR ACTIVITIES

Society of Women Engineers

Robotics Club

Engineers Without Borders

Conference Planner

Member

Community Outreach Chair

SKILLS

Programming Languages/Tools: Python, MATLAB, RStudio, C++, Tableau, LabVIEW, Git, NumPy, Pandas, Scikit-Learn, SpaCy

Programming and Analysis Skills: Machine learning, Data visualization, Web scraping, Modeling, Data analysis

Other Tools: SolidWorks, Fusion 360, FEA, KiCad, Laser cutting, 3D printing, Microsoft Office