

JOEL BRANDINGER

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EDUCATION

Tufts University
B.S. Data Science

Medford, MA
September 2020 – May 2024

- Minors: Mathematics & Computer Science
- GPA: 3.7 / 4.0
- **Relevant Courses:** Data Structures, Algorithms, Machine Learning, Statistical Pattern Recognition, Big Data, Cyber Security, Web Programming, Computer Vision, Machine Structure, Probability, Statistics, Linear Algebra, Calculus 1-3

EXPERIENCE

Tufts University

Medford, MA

Machine Learning Research Assistant

November 2023 – May 2024

- Collaborated with a professor in the Urban & Environmental Policy department contributing to a study aimed at optimizing water resource management in Karachi, Pakistan through advanced predictive analytics
- Utilized Python and R to analyze dataset of water usage from households, employing machine learning techniques such as multiple regression, spectral clustering, and decision trees to predict water usage patterns

JumboCode

Medford, MA

Software Developer

September 2023 – April 2024

- Proactive contributor within a student-run organization dedicated to delivering pro bono software solutions to nonprofits and charitable organizations
- Leveraging technologies and tools including TypeScript, React, Next.js, MongoDB, and Python

Principal Financial Group

Des Moines, IA

Software Engineer Intern

May 2023 – August 2023

- Contributed to development and maintenance of a large-scale data warehouse for Enterprise Data & Analytics department
- Built ETL applications using Informatica Power Center to facilitate data population and curation
- Utilized AWS EC2 instances to extract data from Salesforce using Python and SQL

Prentiss Hockey Performance

Stamford, CT

Data Analytics Intern

May 2022 – August 2022

- Conducted in-depth data analysis to identify key performance indicators for hockey athletes, enabling evidence based decision-making and customized training programs
- Collaborated with coaching staff to streamline data collection and implement performance assessments

SKILLS

Programming Languages: Python, C, C++, Java, JavaScript, SQL

Tools & Frameworks: PyTorch, TensorFlow, SciKit-Learn, Spark, React, Next.js, HTML, CSS, AWS, GCP, Git, Informatica

Spoken Languages: Swedish (native), English (fluent), Spanish (intermediate)

PROJECTS

Chimpanzee Size Estimation

Medford, MA

Data Science Capstone

September 2023 - May 2024

- Innovative project harnessing the power of Python, OpenCV, PyTorch, and SciKit-Learn to develop a computer vision model for accurate size measurements of chimpanzees, utilizing pose estimation and instance segmentation algorithms
- Collaborated with the Kibale Chimpanzee Project and Tufts Simulation Lab to revolutionize the field of non-invasive research and conservation, providing vital scientific insights

Scholar Puck Track

Medford, MA

Personal Project

September 2023

- Developed a full-stack web application tailored to effectively track and visualize NCAA hockey commitments from various junior hockey leagues across North America
- Extracted and preprocessed raw data sourced from the EliteProspects API to construct a robust database in DynamoDB

Spotify Song Recommendations

Medford, MA

Statistical Pattern Recognition

April 2023

- Applied unsupervised machine learning techniques to analyze a dataset of Spotify songs, resulting in identification of distinct musical clusters based on various audio features

ADDITIONAL EXPERIENCE

Tufts University Varsity Ice Hockey Team

Medford, MA

Member

September 2020 – March 2024

Two Sigma Tutors

Boston, MA

Tutor

August 2022 – January 2024