

# Joel Brandinger

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## Education

### Tufts University – BS in Data Science

May 2024

- Minors in Math & CS
- GPA: 3.7 / 4.0
- **Relevant Courses:** Data Structures, Algorithms, Machine Learning, Web Programming, Statistics, AI

## Experience

### Software Engineer, Wayfair – Los Angeles, CA | Remote

July 2024 – Present

- Contributed to the rollout of Universal Route Generation (URG), a graph-based system unifying separate carrier networks into a single routing engine; migrated supplier and carrier data, eliminating fallbacks to legacy route generation methods.
- Developed a Slack integration chatbot to streamline incident response by fetching and summarizing Datadog error logs from failed transit data imports using Gemini API; reduced debugging time for engineers and improved operational visibility.

### Machine Learning Research Assistant, Tufts University – Medford, MA

Nov 2023 – May 2024

- Preprocessed and cleaned a time series dataset of urban water usage in Karachi, handling missing values, feature engineering, and normalization to prepare data for machine learning models.
- Built and tuned a Random Forest model in Python to forecast daily water demand, collaborating with faculty to provide actionable insights for sustainable resource planning.

### Student Software Developer, JumboCode – Medford, MA

Sep 2023 – April 2024

- Built a full-stack web application for Sibling Connection, a nonprofit supporting children in foster care, using TypeScript, React, Python, and MongoDB.
- Collaborated in a cross-functional student team to deliver a user-friendly platform for organizing sibling reunification events and volunteer coordination.

### Data Engineer Intern, Principal Financial Group – Des Moines, IA

May 2023 – Aug 2023

- Developed ETL pipelines using Informatica, Python, and SQL to ingest and transform large-scale datasets for a corporate data warehouse, improving data reliability, and accessibility for analytics.
- Automated extraction of Salesforce CRM data using AWS EC2 and Lambda, reducing manual reporting effort and accelerating data availability for business analysts.

### Data Analyst Intern, Prentiss Hockey Performance – Stamford, CT

May 2022 – Aug 2022

- Analyzed performance data from 1080 Motion testing to evaluate training effectiveness, contributing to a 10% average increase in on-ice speed for elite hockey athletes.

## Skills

**Programming Languages:** Python, C#, SQL, TypeScript, C++, Java

**Frameworks & Libraries:** .NET, React, PyTorch, TensorFlow, Django, FastAPI

**Cloud & Infrastructure:** AWS, GCP, Terraform, Kubernetes, Docker, Kafka

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

## Projects

### Hockey Pathways

- Data-driven application enabling users to explore hockey player progression statistics across leagues and levels.
- Integrated Elite Prospects API and AWS services to collect, store, and process player movement data, providing actionable insights for users.

### Chimpanzee Size Estimation

- Developed a computer vision pipeline using OpenCV, PyTorch, and Scikit-learn to estimate chimpanzee size from image, applying pose estimation and instance segmentation techniques.
- Partnered with the Kibale Chimpanzee Project and Tufts Simulation Lab to support non-invasive research methods for primate conservation and behavioral analysis.

## Additional Experience

### Tutor, Two Sigma Tutors – Boston, MA

Aug 2022 – May 2025

### NCAA Athlete, Tufts University Varsity Ice Hockey Team – Medford, MA

Sep 2020 – March 2024