

# Evan Dietrich

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## EDUCATION

### Tufts University

Expected May 2021

*B.S. in Computer Science, B.S. in Cognitive Brain Science; GPA: 3.78*

Medford, MA

**Honors:** Edgar N. and Faith A. Johnson Scholarship, Dean's List

**Select Coursework:** AI, Algorithms, Data Structures, Machine Learning, NLP, Machine Structure & Assembly Language, Statistics, Linear Algebra, Discrete Math, Computer System Security, Programming Languages, Logic

## PROFESSIONAL EXPERIENCE

### JPMorgan Chase & Co.

Columbus, OH

*Software Engineering Intern*

June 2020 – Aug 2020

- Designed, created, and launched a mobile-first web app for real-time messaging and virtual appointment setup, supplying a nonprofit partner with a secure connection to 4500+ small-business clients. (*Bootstrap, Django, SQL*)
- Built quantitative clustering model to detect at-risk clients and automate their meeting schedule based on financial data and site activity, increasing client engagement metrics to 83% from 20% benchmark. (*Python, SQL*)

### Massachusetts Institute of Technology (MIT)

Cambridge, MA

*Student Technical Researcher*

Aug 2019 – Dec 2020

- Engineered machine learning pipeline to extract hand and facial features from American Sign Language video data in support of translation to English phrases, reducing aggregated signer variance from 34% to 8%. (*Poster*)
- Trained and deployed scalable deep learning models using CNN architecture and seq2seq techniques, achieving 94% translation accuracy on a robust NLP lexicon of emergency phrases. (*Keras, Python, TensorFlow*)

### MIT Lincoln Laboratory

Lexington, MA

*Software Engineering Intern*

May 2019 – Aug 2019

- Designed and developed multi-threaded software system to set hardware configurations and run calibration tests on lasercom terminals, replacing 3-week manual testing with 12-hour automated calibration. (*Poster*)
- Programmed and tested REST API, request-handler, and user interface components of client-server system, increasing accuracy of real-time optical transmission corrections by 3.7x. (*C++, MATLAB*)

### Tufts University

Medford, MA

*Machine Learning Research Assistant*

Jan 2018 – Present

- UrbanismX Research Group:** Analyze cell geo-location data of 4.5M+ Boston Area residents to detect Covid-19 transmission zones, enabling immediate urban policy changes and reducing urban foot traffic by 32%. (*Python*)
- Human-Robot Interaction Lab:** Built GUI display and extended functionality of neural network modeling language switching cost for bilinguals, optimizing total model evaluation time by 83%. (*Python, PyQt*)

### Tufts University Department of Computer Science

Medford, MA

*Senior Teaching Assistant*

Jan 2018 – Dec 2020

- Led office hours and curriculum design for graduate students taking Computational Models in Cognitive Science.
- Instructed weekly 2-hr labs on data structure implementations in Discrete Math and Intro CS. (*C++, Python*)

## LEADERSHIP

### Code for Equity Fellowship

New York, NY

*Software Engineering Fellow*

Dec 2020 – Present

- Lead 6-person team developing graph algorithms to track misinformation spread on social media. (*NLTK, Python*)

### Tufts Computer Science Council

Medford, MA

*Undergraduate Representative*

Sep 2019 – Present

- Meet with professors monthly to resolve student-departmental concerns, ensuring CS program is accessible to all.

## PROJECTS

**Loan Repayment Likelihood:** Built regression model predicting loan repayment via client data, winning hackathon.

**Brain-Computer Interface:** Wrote artifact-correction algorithm removing heartbeat and muscle noise from EEG data.

## SKILLS

**Languages:** Python, C++, SQL, R, C, Java, JavaScript, HTML/CSS, MATLAB

**Technologies/Frameworks:** Linux, AWS, Git, Django, Flask, jQuery, Bootstrap, Node.js, SPSS, Stata, JIRA, Azure