

# Kevin Chen

Data Scientist | Mathematician | Biotech Enthusiast  
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## Education

### Brandeis University

Waltham, Massachusetts

Aug 2020 - May 2024

**Bachelor of Science:** Applied Mathematics, Computer Science

**Honors:** Cum Laude, Dean's List (2020 - 2024), GPA: 3.6

**Courses Taken:** Data Structures, Optimization, Operating Systems, Fourier Analysis, Software Engineering, Machine Learning, Differential Equations, Big Data, Theory of Computation, Statistics

## Work Experience

### Imaging Biomarker Research Intern

Pfizer | Cambridge, Massachusetts

May 2023 - Aug 2023

- Determined strong correlation ( $>0.7$ ) between histologic and biologic biomarkers of liver health from MRI and ultrasound images in clinical trial data
- Built and tested various ML models (Logistic regression, decision trees, KNN, random forest) in scikit-learn to predict liver biopsy health from non-invasive tests, resulting in a 30% improvement in accuracy with imaging data
- Mapped parametric images in MATLAB to model arterial and venous blood flow related to HFpEF

### Preschool Teacher's Assistant

Lemberg Children's Center | Waltham, Massachusetts

Oct 2021 - May 2024

- Aided teachers in classrooms of 8-20 children aged 3-5 in their daily routine.
- Assisted, taught and played with children to help them develop physically, socially and mentally.
- Contributed to a safe and positive working environment at school

### Order Fulfillment Associate

Home Depot | Greenfield, Massachusetts

Jun 2021 - Aug 2022

- Created, fulfilled and packed orders totaling upwards of thousands of dollars.
- Oversaw packaging and delivery of orders to be picked up or shipped.
- Provided customer service and was involved in training 3 new team members monthly.
- Worked with departments across the store to locate and pick items, reducing turnaround time by 10%.

## Projects

### Chewy Hackathon

Apr 2023

- Collaborated with a team of hackers to build a website and a mobile app mockup, won 2nd place
- Wrote SQL and Python code to search databases based on user queries
- Incorporated a live Google Maps JavaScript API to visualize nearby offices.

### Bit by Bit Coding Website

Sep 2023 - May 2024

- Partnered with a team of developers to maintain and update club website using JavaScript, HTML and CSS
- Promoted club mission of increasing teen digital literacy to fellow students, drawing in 2 members a semester

### Machine Learning Final Project

Dec 2023

- Applied decision tree and random forest classifiers to a dataset of English Premier League matches to see if we could predict the winner of future matches from prior match data.
- Utilized Pandas dataframes and deep learning techniques to better interpret and visualize data.
- Achieved an accuracy score of  $>90\%$  and concluded that AI could in fact make meaningful predictions about sports

### Intro to AI Final Project

Dec 2023

- Partnered with 3 classmates to code a CNN to classify and predict handwriting in the EMNIST dataset.
- Built upon my code in TensorFlow to be implemented in PyTorch, achieved an accuracy rate of  $>90\%$

### Optimization Final Project

Dec 2022

- Worked with 2 other classmates to implement a stochastic gradient descent method in Python to solve common optimization problems
- Tested Adam's performance by adjusting hyperparameters such as learning rate, batch size and step size
- Compared the performance of Adam to SGD using matplotlib, concluded that Adam converged up to 15% faster

## Core Skills

**Programming Languages:** Python, Matlab, R, SQL, Java, C, HTML/CSS, Wolfram Language, React

**Software:** VSCode, Jupyter, PowerBI, Tableau, Spyder, Eclipse, Stata, RStudio, MS Office, Google Suite