

# Chaya Trapedo

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## EDUCATION

### Stern College for Women, Yeshiva University

Expected May 2026

- Bachelor of Arts in Computer Science, Minors in Math and Music
- GPA 3.91, S. Daniel Abrams Honors Student
- Relevant Coursework: Algorithms (Fall 2024), Linux Programming for Data Analysis (Fall 2024), Multivariable Calculus (Fall 2024), Data Structures, Programming Languages, Introduction to Computer Science, Calculus II, Linear Algebra

## SKILLS

**Programming Languages:** Python, Java, AWK, Kotlin, C++, C, JavaScript, HTML, CSS

**Software/Frameworks:** Git, Linux/Unix, MATLAB, PyTorch, pandas, OpenCV, TensorFlow, NumPy, Pytest, NLTK, tkinter

**Interests:** Machine Learning, Natural Language Processing, Data Science, Music (Voice/Piano), Graphic Design

## WORK EXPERIENCE

### Yeshiva University, Teaching Assistant and Peer Tutor

New York, NY | June 2024 – Present

- Led recitations and provided instructive feedback on homework assignments for the Fall 2024 Data Structures course
- Assisted the professor in developing course materials (slides/review questions) to enhance the learning experience
- Tutored CS students in all classes, fostering a deeper understanding of complex topics and guiding debugging

### Yeshiva University, Research Assistant

Remote | May 2024 – Present

- Selected as one of 10 awardees of an \$1800 student research grant in computer science at Yeshiva University
- Engineered data pipeline to process 1052 recorded lectures for finetuning Whisper's Yeshivish-English dialect
- Conducting analyses of and exploring the implications of results for academic journal publication

### Columbia University Neuropsychology Lab, Research Assistant

New York, NY | February 2024 – Present

- Collaborated with a team of 5 researchers and 2 research assistants to execute experiment objectives in Python code
- Developed Python scripts to simulate route learning for hippocampal activation during fMRI screenings for epilepsy
- Worked with researchers to implement software to track and collect eye movement data during experiment trials

## PROJECTS

### Ball Tree Class

April 2024 – May 2024

- Python implementation of a multidimensional organization Ball Tree data with efficient proximity-based algorithms
- Included key functionalities including retrieving tree size, radius, depth, displaying attributes, finding data points, listing nearest neighbors, and exporting data to CSV, ensuring robust error handling for data integrity

### Bloom Filter and Spell Check Demonstration

March 2024

- Python implementation of a tunable probabilistic Bloom filter data structure that ensures  $O(1)$  search time
- Built interactive terminal script to demonstrate Bloom filter searching on a data set with 645,000 entries

### dikduk.io Transliteration Editor

October 2023 – February 2024

- Application that uses dynamic programming that reads and writes transliterated .txt files and allows users to make edits
- Incorporated a tkinter-based GUI that flags over 950 potentially misspelled Hebrew and Yiddish transliterated words
- Included formulas to calculate and display document word statistics and Flesch readability scores

## LEADERSHIP

### Yeshiva University Office of Student Life, Student Assistant

New York, NY | June 2024 – May 2025

- Organized move-in for a section of 300+ first time on campus students, ensuring technical and emotional support
- Led information sessions to acquaint new students with the campus, university technology, and academic resources

### UPchieve, Volunteer Academic Coach

Remote | November 2020 – Present

- Provided one-on-one tutoring to over 60 students middle and high school students from underprivileged backgrounds
- Certified to assist students in 13 areas in computer science, math, history, English, SAT/ACT, and college admissions
- Worked with students to confidence in their study skills, writing analysis and techniques, and test-taking strategies

## AWARDS

Yeshiva University Summer Student Research Grant, 2024

AnitaB.org Advancing Inclusion Student Scholarship, 2024

S. Daniel Abrams Honors Student, 2022 – Present