

# Kyla Levin

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<https://github.com/khlevin>

## EDUCATION

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### **M.S. / Ph.D. Computer Science, Advisor: Emery Berger**

Expected: May 2028

University of Massachusetts Amherst, Amherst, MA

GPA: 3.92

Relevant Coursework: Compilers, Adv. Algorithms, Neural Networks

### **B.S. Computer Science and Chemical Engineering**

2019 – 2023

Tufts University, Medford, MA

GPA: 3.67

Relevant Coursework: Software Engineering, Cryptography, Programming Languages, Computation Theory, Algorithms, Cybersecurity, Assembly and Machine Structures, Data Structures, Game Design, Web Programming

## WORK EXPERIENCE

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### **Littauer Library Student Assistant Programmer**

May 2023 – Aug. 2023

Harvard University Widener Library, Judaica Division

- Performed tech stack development on the Judaica Division's digital collection of 8M+ records in FileMaker.
- Designed interfaces for more accessible database navigation across programming backgrounds and languages.
- Wrote compilation programs to better visualize collection statistics and print analysis results into reports.
- Improved data sanitization standards for record population using SQL in Alma Oracle Analytics.

### **Intelligence Team Intern**

July 2022 – Sep. 2022

Tortoise Media

- Refined a natural-language processing algorithm to scrape public financial data from government websites and process the data into a machine learning model that could detect unusual trends in donors or amounts being spent.
- Wrote a clustering algorithm to group together donor and MP names with similar names and titles.
- Organized the company's subscriber lists and access codes in Excel in collaboration with the Partnerships team.

## RESEARCH

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### **Graduate Research Assistant**

Sep. 2023 – Present

PLASMA Lab, University of Massachusetts Amherst

- Modifying C/C++ debugging tools, *ChatDBG* and *CWhy*, to converse with LLMs such as ChatGPT in order to reduce user involvement and make debuggers such as LLDB and GDB more accessible to software developers.
- Prompt engineering and using the APIs of existing debuggers to provide the LLM with a refined and more readable stack trace, as well as expanding accessibility to Windows through a WinDBG plug-in.

### **Undergraduate Research Assistant**

May 2022 – May 2023

The Foster Lab, Tufts University, Computer Science Dept.

- Developed a formalism for a path-sensitive programming language to improve the type-inferencing capabilities of REST API responses.
- Analyzed the quality and accuracy of REST API specs created with *rdl*, a custom type-inferencing tool, against publicly used documentation software such as SwaggerHub and Postman.
- Wrote a sample REST API using Ruby on Rails and documented its API spec both manually and through an automatic OpenAPI generation software.

## **Laidlaw Scholar Undergraduate Research Assistant**

June 2021 – Sep. 2021

The Cowen Lab, Tufts University, Computer Science Dept.

- Assisted on a graduate project on using protein networks to locate causal genes for Parkinson's Disease and programmed modules that could execute an efficient graph-searching algorithm to traverse protein nodes. Published "Neighborhood embedding and re-ranking of disease genes with ADAGIO" with Mert Erden and Lenore Cowen and presented at ACM-BCB 2022. <https://doi.org/10.1145/3535508.3545542>
- Discussed research and career paths with computational biology experts to introduce undergraduate students to the field and encourage their outreach for possible research opportunities.

## **ACADEMIC EXPERIENCE**

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### **Teaching Assistant – Introduction to Computation**

Sep. 2023 – Dec. 2023

University of Massachusetts Amherst, Manning College of Information and Computer Sciences

- Guiding students through peer-to-peer learning by leading discussions and responding to student questions and concerns both in office hours and online through Piazza.

### **Academic Tutor**

May 2022 – January 2023

Varsity Tutors

- Provided hourly coaching in a wide variety of computer science, chemistry, math, and general education subjects.
- Created my own materials to help students from middle school to adult learners develop new programming skills with no prior experience, improve standardized test grades, or study materials for a class.

### **Teaching Assistant – Cryptography and Discrete Mathematics**

Aug. 2020 – May 2023

Tufts University, Computer Science Dept.

- Wrote administrative programs in C++ to help lecturing faculty with organizing grades and student data.
- Graded and reviewed feedback on all student homework assignments and exams for classes of 160+.
- Answered student inquiries and provided a collaborative learning environment through office hours.

## **SKILLS AND INTERESTS**

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**Programming Languages:** C++, C, Java, Python, HTML, JavaScript, Ruby

**Software programs:** Unity, Eclipse, Adobe, GitHub, LaTeX, Office 365 products

**Interests:** Bartending, studio art, creative writing, chess, ballroom dancing