

Kyla Levin

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EDUCATION

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

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

Graduate Research Assistant

Sep. 2023 – Present

PLASMA Lab, University of Massachusetts Amherst

- *ChatDBG*: Developing a new debugging tool to converse with large language models such as ChatGPT to reduce user involvement and make conventional debuggers more accessible to software developers. Currently investigating upgrading *ChatDBG* into a reverse debugger through Undo.io.
- *Programming by Example*: Investigating the LLM's ability to transform a user's hand-drawn sketches of an algorithm through diagrams of data structures into rigorous and efficient code.

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 *rll*, 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

Teaching Assistant – Introduction to Computation

Sep. 2023 – Dec. 2023

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

- Guided students through peer-to-peer learning by leading weekly discussions and lab sessions, as well as responding to student questions and concerns both in office hours and online through Piazza and on Zoom.
- Evaluated and graded assignments, projects, and exams using established rubrics, providing detailed and constructive feedback to help students improve their understanding of machines and computation.

Academic Tutor

May 2022 – May 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

Programming Languages: C++, C, Java, Python, HTML5, JavaScript, Ruby

Software programs: OpenAI, GDB, LLDB, PDB, Undo.io, Docker, Eclipse, Adobe, Git, LaTeX, Office 365 products

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