Kyla Levin

https://khlevin.github.io/KylaHLevin/
https://www.linkedin.com/in/kylalevin/

KHLevin@umass.edu
610-312-3446

EDUCATION

M.S./ Ph.D. Computer Science Expected Graduation: May 2028
University of Massachusetts Amherst, GPA: 3.96, Advisor: Emery Berger

B.S. Computer Science and Chemical Engineering May 2023
Tufts University, graduated *magna cum laude*

SKILLS

Programming Languages: C++, C, Java, Python, HTML5, JavaScript, Ruby
Systems: OpenAI, Bedrock, GDB, LLDB, PDB, Undo.io, Docker, Adobe, Git, Linux OS, LaTeX

RESEARCH

PLASMA Lab with Emery Berger Sep 2023 – Present
University of Massachusetts Amherst

- *ChatDBG:* Developed a new debugging tool to converse with large language models to reduce user involvement and make conventional debuggers more accessible to software developers. ChatDBG enables LLMs to autonomously answer complex user queries about program behavior.
  Published and won "Distinguished Artifact" at FSE 2025: https://dl.acm.org/doi/10.1145/3729355
- *Pythoness:* Investigating a tool that uses LLMs to automatically generate rigorous and efficient code through natural-language descriptions and tests. Currently expanding the automatic testing framework that creates and runs unit tests, property-based tests, class constraints, and integration tests on generated code.
  Position paper: https://arxiv.org/abs/2501.02138

The Foster Lab with Jeffrey Foster May 2022 – May 2023
Tufts University

- *REST$_\pi$*: Developed REST$_\pi$, a novel path-sensitive type inference system that elevates REST API documentation generation by accurately capturing the relationship between API input and application and output. Helped to analyze the quality of REST API specs created with REST$_\pi$ implemented for Ruby built on *RDL*, an existing type-inferencing tool, against publicly used documentation software such as SwaggerHub and Postman.
  Published in OOPSLA 2025: https://dl.acm.org/doi/10.1145/3763055

The Cowen Lab with Lenore Cowen Jun – Sep 2021
Tufts University

- *ADAGIO*: Assisted on a graduate project to develop an efficient graph-searching algorithm that can traverse protein-protein interaction networks to identify possible unidentified disease genes. Helped evaluate on known disease modules for neurological diseases such as Alzheimer's and Parkinson's to locate possible clusters of causal genes.
  Published in ACM-BCB 2022: https://doi.org/10.1145/3535508.3545542

WORK EXPERIENCE

Applied Scientist Intern May – Aug 2025
Amazon Web Services

- Completed a research internship at AWS with the Automated Reasoning team under manager Mike Hicks.

Littauer Library Student Assistant Programmer May – Sep 2023
Harvard University

- Performed full stack development on the Judaica Division's digital collection of 8M+ records in FileMaker.
- *Front end:* Designed new web interfaces and organized a database architecture that optimized the accessibility of database navigation for people across various programming backgrounds and languages.
- *Back end:* Wrote compilation programs to better visualize collection statistics, analyze the data, and print the results into comprehensive reports.

Teaching Assistant for Discrete Math, Cryptography, and Computation Aug 2020 – Dec 2023
University of Massachusetts Amherst and Tufts University

- Graded and reviewed feedback on all student homework assignments and exams for classes of 160+. Led students through peer-to-peer learning in recitations, workshops, review sessions, weekly office hours, and on Piazza.
- Wrote administrative software in C++ to help lecturing faculty with organizing grades and student data.