Kyla Levin

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SUMMARY OF QUALIFICATIONS

- Detail-oriented research student passionate about using software developing techniques to solve real-world problems.
- Excellent problem solving, programming, and creative thinking skills that can adapt to new fields and applications.
- Strong written and verbal skills with years of experience collaborating in teams and communicating complex and abstract ideas to those outside of technical fields.

EDUCATION

University of Massachusetts Amherst, Amherst MA Expected Graduation: May 2028
M.S. / Ph.D. Computer Science, Advisor: Emery Berger
GPA: 3.92

Tufts University, Medford MA 2019 – 2023
B.S. Chemical Engineering and Computer Science, *magna cum laude*

RESEARCH EXPERIENCE

PLASMA Lab with Emery Berger Sep 2023 – Present
University of Massachusetts Amherst, Manning College of Information and Computer Sciences

- *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.

The Foster Lab with Jeffrey Foster May 2022 – May 2023
Tufts University, Computer Science Dept.

- Developed a formalism for a path-sensitive programming language to improve the capabilities of *rdl*, a type-inferencing tool used to identify the signatures of REST API methods to be used in automatic spec-generation.
- Analyzed the quality and accuracy of REST API specs created by *rdl*, against publicly used documentation software such as SwaggerHub and Postman. Involved creating and collecting test suites of sample APIs.

The Cowen Lab with Lenore Cowen June 2021 – Sep. 2021
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

WORK EXPERIENCE

Littauer Library Student Assistant Programmer May 2023 – Sep. 2023
Harvard University, Widener Library

- 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 discussions and helped them solve complex math and computer theory problems both in weekly office hours and online through Piazza forums.
- Wrote administrative software in C++ to help lecturing faculty with organizing grades and student data.

SKILLS

Programming Languages: C++, C, Java, Python, HTML5, JavaScript, Ruby
Skills: OpenAI, GDB, LLDB, PDB, Undo.io, Docker, Adobe, Git, SQL, LaTeX, Linux OS, Microsoft Office Products