Kyla Levin

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EDUCATION

M.S. / Ph.D. Computer Science, Advisor: Emery Berger Expected Graduation: 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

WORK EXPERIENCE

Teaching Assistant – Introduction to Computation Sep. 2023 – Dec. 2023
University of Massachusetts Amherst, Manning College of Information and Computer Science

- 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.

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.

Teaching Assistant – Cryptography and Discrete Mathematic 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.

RESEARCH

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

- 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. Currently investigating upgrading *ChatDBG* into a time-travel debugger by allowing the LLM to step forwards and backwards in the execution and collect program state information at any point in a deterministic reproduction.
- 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.

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 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.

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

SKILLS AND INTERESTS

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