Claire Schlesinger

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github.com/esslushy | linkedin.com/in/claire-schlesinger/ | sites.google.com/view/claire-schlesinger/

Education

Northeastern University, Boston, MA   September 2021 – May 2025
Khoury College of Computer Sciences
Bachelor of Science in Computer Science   **GPA 3.98/4.0**

| *Related Courses:* | Object-Oriented Design \| Algorithms \| Computer Systems \| Software Engineering |
| | Artificial Intelligence \| Data Mining and Machine Learning \| LLMs |

Computer Knowledge

Languages:	Python, Java, C, JavaScript, TypeScript
Frameworks:	Torch, Tensorflow, Sklearn, Numpy, Pandas, SciKitLearn, React.js, Node.js
Techniques:	Machine Learning, Graph Neural Networks, NLP, LLMs, Data Processing, Data Analysis
Software/Tools:	Github, Excel, Word, Vim, Docker

Professional Experience

Autonomous Mobile Robotics Lab | Austin, Texas   May – August 2024
Undergraduate Research Assistant at University of Texas
- Utilized Code LLMs to generate recovery code for robots upon being interrupted with new instructions.
- Created a website which allowed a user to generate code and recovery code for a robot.
- Performed case studies to analyze the effectiveness of the recovery system in real world situations.

Programming Research Lab | Boston, Massachusetts   January 2023 – May 2025
Undergraduate Research Assistant at Northeastern University
- Developed a benchmark to test Code LLMs performance on context-based tasks.
- Tested ChatGPT's ability to write code in a variety of languages to solve HumanEval questions for comparison against StarCoder.
- Evaluated StarCoder's perplexity taking into account different context length windows to show the benefit of a larger context window for CodeLLMs and wrote up the results on the StarCoder paper.
- Researched an improved method of fine tuning using a modified form of self-instruct for StarCoder.
- Developed a language model system to convert human commands into robot code.

Research

Claire Schlesinger, Arjun Guha, Joydeep Biswas. "Creating and Repairing Robot Programs in Open-World Domains". *ArXiv preprint*. October 2024.

Federico Cassano, John Gouwar, Francesca Lucchetti, **Claire Schlesinger**, Carolyn Jane Anderson, Michael Greenberg, Abhinav Jangda, & Arjun Guha. "Knowledge Transfer from High-Resource to Low-Resource Programming Languages for Code LLMs". *Splash 2024 OOPSLA*. October 2024.

Zichao Hu, Francesca Lucchetti, **Claire Schlesinger**, Yash Saxena, Anders Freeman, Sadanand Modak, Arjun Guha, & Joydeep Biswas. "Deploying and Evaluating LLMs to Program Service Mobile Robots". *IEEE RA-L*. January 2024.

Raymond Li, Loubna Ben Allal, …, **Claire Schlesinger**, …, Arjun Guha, Leandro von Werra, & Harm de Vries. "StarCoder: may the source be with you!". *TMLR*. December 2023.

Projects

Deep Reinforcement Learning for Dynamic Navigation   October 2024 – November 2024
- Created a simulation involving many agents navigating around a fixed environment.
- Built an actor-critic reinforcement learning algorithm utilizing equivariant graph neural networks to teach an agent to navigate both around the environment and other agents.
- Tested a variety of graph networks across a range of environments to identify which algorithms performed best across which task.