Harry Liuson

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Education

University of Rochester — Rochester, NY
BS in Computer Science, BA in History, Minor in Mathematics — *August 2021 – Present*

Publications

- **Harry Liuson**, Jianxun Lian, Yuxuan Lei, and Xing Xie, "Low-Parameter Soft-Prompt Learning for Behavioral Adaptation in LLMs," *Under Review for AAAI 2025*, August 2024.
- Michael C. Chavrimootoo, Yumeng He, Matan Kotler-Berkowitz, **Harry Liuson**, and Z. Nie, "Evaluating the Claims of 'SAT Requires Exhaustive Search'," *arXiv preprint arXiv:2312.02071*, December 2023.*
- Michael C. Chavrimootoo, Yumeng He, Matan Kotler-Berkowitz, **Harry Liuson**, and Z. Nie, "A Critique of Du's 'A Polynomial-Time Algorithm for 3-SAT'," *arXiv preprint arXiv:2404.04395*, April 2024.*

*Authors listed alphabetically, all authors contributed equally.

Reviewing Experience

- Referee for *MFCS 2024*

Experience

Microsoft Corporation — Beijing, China
Research Intern — *May 2024 - Present*

- Authored a paper on low-parameter soft-prompt learning for behavioral adaptation in large language models. Demonstrated competitive or superior performance over LoRA and soft-prompting baselines, as well as benefits in terms of adaptability and computational efficiency.
- Conducted a comprehensive review of current methods for roleplay using large language models. Reproduced, evaluated, and critiqued contemporary methods, motivating our proposed approach.
- Received Stars of Tomorrow award for performance at Microsoft.

University of Rochester — Rochester, NY
Undergraduate Researcher — *September 2023-May 2024*

- REU on Computational Social Choice under Professor Lane Hemaspaandra and Michael C. Chavrimootoo. Research on complexity of election manipulations problems under voting rule uncertainty.

Undergraduate Researcher — *December 2022-Feb 2024*

- Research on alternatives to backpropagation under Professor Chris Kanan and Jhair Gallardo. Investigated theoretical properties of Kickback algorithm and empirical performance on image classification and regression tasks.

Teaching Assistant — *September 2022-Present*

- Teaching Assistant for CSC 246 Machine Learning (Fall 2022), CSC 282 Design and Analysis of Efficient Architectures (Spring 2023), CSC 245 Deep Learning (Fall 2023), CSC 280 Theory of Computation (Fall 2024). Responsible for grading, holding office hours, and leading recitations.

Pulumi Corporation — Seattle, WA
Software Intern — *Summer 2022*

- Collaborated on first place winning hack week project which served as the prototype for a major improvement of the provider authoring experience.
- Modified the Pulumi plugin loading logic to simplify the workflow for developing new Pulumi plugins

Trainiac (aquired by Gympass in 2021) — Seattle, WA
Software Intern — *Summer 2019, 2020*

- Independently scoped, designed, built, and deployed internal web tool to complement trainer iOS app.
- Developed tools in SQL to dramatically reduce error in estimated user workout duration. Implemented quality of life improvements in trainer iOS app