

Skyler Hallinan

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EDUCATION

University of Southern California

Ph.D. in Computer Science

Advisor: Xiang Ren

Los Angeles, CA

December 2027 (expected)

University of Washington

M.S. in Computer Science (GPA: 3.99)

Advisor: Yejin Choi

Seattle, WA

June 2024

B.S. in Computer Science, Departmental Honors, Cum Laude (GPA: 3.86)

June 2021

Advisor: Yejin Choi

INVITED TALKS

Microsoft (Redmond, WA – Virtual)

“OpaqueToolsBench: Learning Nuances of Tool Behavior Through Interaction”

Dec 2025

USC ISI Seminar (Los Angeles, CA)

“The Surprising Effectiveness of Membership Inference with Simple N-Gram Metrics” [video]

Apr 2025

Qualcomm (San Diego, CA)

Joint Talk with Jillian Fisher: “Small but Mighty: Empowering Small Language Models to Outperform Their Larger Counterparts”

Nov 2024

Apple (Seattle, WA – Virtual)

“Enhancing the Utility of Large Language Models with Algorithms”

Feb 2023

PUBLICATIONS

* denotes equal contributions

Google Scholar: https://scholar.google.com/citations?user=mO_tZ94AAAAJ

Semantic Scholar: <https://www.semanticscholar.org/author/Skyler-Hallinan/1474550731>

PREPRINTS

[P1] **Skyler Hallinan**, Thejas Venkatesh, Xiang Ren, Sai Praneeth Karimireddy, Ashwin Paranjape, Yuhao Zhang, and Jack Hessel. “*OpaqueToolsBench: Learning Nuances of Tool Behavior Through Interaction*”. In submission to ICLR 2026

CONFERENCE PAPERS

[C12] Jaehun Jung, Seungju Han*, Ximing Lu*, **Skyler Hallinan***, David Acuna, Shrimai Prabhumoye, Mostafa Patwary, Mohammad Shoeybi, Bryan Catanzaro, and Yejin Choi. “*Prismatic Synthesis: Gradient-based Data Diversification Boosts Generalization in LLM Reasoning*”. NeurIPS, 2025. [pdf]

[C11] **Skyler Hallinan**, Jaehun Jung, Melanie Sclar, Ximing Lu, Abhilasha Ravichander, Sahana Ramnath, Yejin Choi, Sai Praneeth Karimireddy, Niloofar Mireshghallah, and Xiang Ren. “*The Surprising Effectiveness of Membership Inference with Simple N-Gram Metrics*”. CoLM, 2025. [pdf]

[C10] Sahana Ramnath, Anurag Mudgil, Brihi Joshi, **Skyler Hallinan**, and Xiang Ren. “*Amulet: Putting Complex Multi-Turn Conversations on the Stand with LLM Juries*”. EMNLP, 2025. [pdf]

[C9] Ximing Lu, Melanie Sclar, **Skyler Hallinan**, Niloofar Mireshghallah, Jiacheng Liu, Seungju Han, Allyson Ettinger, Liwei Jiang, Khyathi Chandu, Nouha Dziri, and Yejin Choi. “*AI as Humanity’s Salieri: Quantifying*

Linguistic Creativity of Language Models via Systematic Attribution of Machine Text against Web Text". ICLR, 2025. [pdf]

Oral Presentation - Top 1.8% of Accepted Papers; Media coverage by Science

[C8] Jillian Fisher*, **Skyler Hallinan***, Ximing Lu, Mitchell Gordon, Zaid Harchaoui, and Yejin Choi. “*StyleRemix: Interpretable Authorship Obfuscation via Distillation and Perturbation of Style Elements*”. EMNLP, 2024. [pdf]

[C7] Sahana Ramnath, Brihi Joshi, **Skyler Hallinan**, Ximing Lu, Liunian Harold Li, Aaron Chan, Jack Hessel, Yejin Choi, and Xiang Ren. “*Tailoring Self-Rationalizers with Multi-Reward Distillation.*” ICLR, 2024. [pdf]

[C6] **Skyler Hallinan**, Faeze Brahman, Ximing Lu, Jaehun Jung, Sean Welleck, and Yejin Choi. “*STEER: Unified Style Transfer with Expert Reinforcement.*” EMNLP (Findings), 2023. [pdf]

Oral Presentation at the Third Workshop on Novel Ideas in Learning-to-Learn through Interaction (NILLI)

[C5] Aman Madaan, Niket Tandon, Prakhar Gupta, **Skyler Hallinan**, Luyu Gao, Sarah Wiegreffe, Uri Alon, Nouha Dziri, Shrimai Prabhumoye, Yiming Yang, Shashank Gupta, Bodhisattwa Prasad Majumder, Katherine Hermann, Sean Welleck, Amir Yazdanbakhsh, Peter Clark. “*Self-Refine: Iterative Refinement with Self-Feedback.*” NeurIPS, 2023. [pdf]

Top 100 most-cited AI papers of 2023 (#45)

[C4] Ximing Lu, Faeze Brahman, Peter West, Jaehun Jang, Khyathi Chandu, Abhilasha Ravichander, Lianhui Qin, Prithviraj Ammanabrolu, Liwei Jiang, Sahana Ramnath, Nouha Dziri, Jillian Fisher, Bill Yuchen Lin, **Skyler Hallinan**, Xiang Ren, Sean Welleck and Yejin Choi. “*Inference-Time Policy Adapters (IPA): Tailoring Extreme-Scale LMs without Fine-tuning.*” EMNLP, 2023. [pdf]

[C3] **Skyler Hallinan**, Alisa Liu, Yejin Choi, and Maarten Sap. “*Detoxifying Text with MaRCO: Controllable Revision with Experts and Anti-Experts.*”. ACL, 2023. [pdf]

[C2] Jiacheng Liu, **Skyler Hallinan**, Ximing Lu, Pengfei He, Sean Welleck, Hannaneh Hajishirzi, and Yejin Choi. “*Rainier: Reinforced Knowledge Introspector for Commonsense Question Answering.*” EMNLP, 2022. [pdf]

[C1] Saadia Gabriel, **Skyler Hallinan**, Maarten Sap, Pemi Nguyen, Franziska Roesner, Eunsol Choi, and Yejin Choi. “*Misinfo Reaction Frames: Reasoning about Readers Reactions to News Headlines.*” ACL, 2022. [pdf]

MEDIA COVERAGE

Science

Dec, 2024

AI writing is improving, but it still can't match human creativity [link]

Paul G. Allen School of Computer Science & Engineering

Jun, 2021

“Every single one of you has what it takes to do great things”: A tribute to the Allen School Class of 2021 [link]

Paul G. Allen School of Computer Science & Engineering

Dec, 2020

Six Allen School undergraduates recognized for excellence in research [link]

RESEARCH EXPERIENCE

INK Lab, University of Southern California

Aug 2024 – Present

Graduate Research Assistant, Advisor: Xiang Ren

Seattle, WA

xlab, Paul G. Allen School of Computer Science & Engineering

Sep 2020 – Aug 2024

Undergraduate and Graduate Research Assistant, Advisor: Yejin Choi

Seattle, WA

INDUSTRY EXPERIENCE

Samaya AI

May 2025 – Aug 2025

Research Intern

Mountain View, CA

- Led project on improving language models' tool-use capabilities in real-world environments where tools are underspecified or hard to disambiguate

Siri Web Answers Team, Apple
AI/ML Research Intern

Aug 2023 – Jan 2024
Seattle, WA

- Benchmarked Siri post-training alignment strategies by comparing PPO to DPO, evaluating efficiency and model performance via a multi-dimensional rubric for conversational quality and safety.
- Led project on improving the citation-generating capabilities of language models, by creating a machine-generated, question-answering dataset with citations to be used as instruction tuning data

AWS CodeWhisperer, Amazon
Applied Scientist Intern

Apr 2023 – Jul 2023
New York, NY

- Led project on a controlled decoding framework for code generation with intermediate, approximate evaluation, improving performance with state-of-the-art models without any additional training

AWARDS AND HONORS

Anneberg Graduate Fellowship granted by Viterbi School of Engineering

2024

Viterbi School of Engineering, University of Southern California

Los Angeles, CA

- Selected for a highly competitive, merit-based fellowship recognizing academic excellence and potential for leadership in engineering research.

Outstanding Senior Award

2021

Paul G. Allen School of Computer Science and Engineering, University of Washington

Seattle, WA

- One of three graduating seniors out of 450 chosen based on exceptional academic performance, significant contribution to the advancement of knowledge, and demonstrated leadership potential and good citizenship.

Dean's Medal Nomination

2021

College of Arts & Sciences, University of Washington

Seattle, WA

- Nominated for the 2021 College of Arts & Sciences Dean's Medal, awarded to the top graduating senior in the department

Levinson Emerging Scholar

2020

University of Washington

Seattle, WA

- Awarded to talented and highly motivated upperclassmen pursuing creative and advanced STEM research

Stratos–Stephen Endowed Scholar

2019

University of Washington

Seattle, WA

- Competitive scholarship that supports engineering students pursuing advanced research

Undergraduate Research Conference Travel Award

2019

University of Washington

Seattle, WA

- Awarded competitive travel scholarship to attend and present at conference (IEEE VIS 2019)

Robert B. Rodal Endowed Scholar

2018

University of Washington

Seattle, WA

- Merit-based scholarship for junior students in engineering

PROFESSIONAL SERVICE

Reviewer for ICLR

2025 – Present

Program Committee, First Memorization in Deep Learning Workshop at ACL 2025 (L2M2)

2025

Reviewer for NeurIPS

2025 – Present

Reviewer for CoLM

2025 – Present

Reviewer for ACL Rolling Review

2023 – Present

TEACHING

Teaching Assistant, CSE 517: (Graduate) Natural Language Processing <i>University of Washington; Instructor: Yejin Choi</i>	<i>Winter 2024</i> Seattle, WA
Head Teaching Assistant, CSE 573: (Graduate) Introduction to Artificial Intelligence <i>University of Washington; Instructor: Hannaneh Hajishirzi</i>	<i>Winter 2023</i> Seattle, WA
Teaching Assistant, CSE 473: Introduction to Artificial Intelligence <i>University of Washington, Instructor(s): Hannaneh Hajishirzi, Luke Zettlemoyer</i>	<i>Spring 2021 – Autumn 2023</i> Seattle, WA
Teaching Assistant, CSE 421: Introduction to Algorithms <i>University of Washington, Instructor: Paul Beame</i>	<i>Winter 2020</i> Seattle, WA

SERVICE

Research Pathway Mentor <i>University of Southern California CS Research Pathways Program</i>	<i>2025 – Present</i> Los Angeles, CA
• Provided academic guidance to undergraduates from underrepresented backgrounds, offering advice on navigating computer science research opportunities and preparing for graduate school.	
Undergraduate Research Leader <i>University of Washington Undergraduate Research Program</i>	<i>2020-2022</i> Seattle, WA
• Introduced and encouraged undergraduate research by presenting at seminars and academic events	
“Big” (Mentor) <i>University of Washington ACM Big/Little Mentorship Program</i>	<i>2020-2022</i> Seattle, WA
• Mentored computer science undergraduates, providing internship help, career planning, and course advice	

OTHER PUBLICATIONS

CONFERENCE PAPERS

[1] **S. Hallinan**, J. Buszkiewicz, C. Rose, and A. Drewnowski, “Ultra-processed Foods are Needed for Nutrient Adequate Diets: Linear Programming Analyses of the Seattle Obesity Study”, *Nutrients* 2021

WORKSHOP PAPERS

[2] A. T. Chen, J. H. Chang, **S. Hallinan**, and D. C. Mohr, “Mapping User Trajectories: Using Participant Flows to Examine Behavior and Outcomes in Digital Health Intervention Data”, 2019 IEEE Workshop on Visual Analytics in Healthcare (VAHC)