

Skyler Hallinan

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EDUCATION

University of Southern California

Ph.D. in Computer Science

Advisor: Xiang Ren

Los Angeles, CA

June 2028 (expected)

University of Washington

M.S. in Computer Science (GPA: 3.98)

Advisor: Yejin Choi

Seattle, WA

June 2024

University of Washington

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

Advisor: Yejin Choi

Seattle, WA

June 2021

INVITED TALKS

Qualcomm (San Diego, CA)

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

Nov 2024

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

None currently

CONFERENCE PAPERS

[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*”. To appear at ICLR, 2025. [pdf]

Oral Presentation - Top 1.8% of Accepted Papers

[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*”. To appear at Proceedings of 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.*” In ICLR, 2024. [pdf]

[C6] **Skyler Hallinan**, Faeze Brahman, Ximing Lu, Jaehun Jung, Sean Welleck, and Yejin Choi. “*STEER: Unified Style Transfer with Expert Reinforcement.*” In Findings of EMNLP, 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 Wiegrefe, 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.*” In 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.*” In Proceedings of EMNLP, 2023. [pdf]
- [C3] **Skyler Hallinan**, Alisa Liu, Yejin Choi, and Maarten Sap. “*Detoxifying Text with MaRCo: Controllable Revision with Experts and Anti-Experts.*” In Proceedings of ACL (Short), 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.*” In Proceedings of 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.*” In Proceedings of ACL, 2022. [pdf]

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
- H2Lab, Paul G. Allen School of Computer Science & Engineering** Jun 2021 – Dec 2021
Undergraduate Research Assistant, Advisor: Hannaneh Hajishirzi Seattle, WA

INDUSTRY EXPERIENCE

- Web Answers Team, Apple** Aug 2023 – Jan 2024
AI/ML Research Intern Seattle, WA
- 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** Apr 2023 – Jul 2023
Applied Scientist Intern, Supervisor: Xiaofei Ma Seattle, WA
- 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
- Bloomberg** Jun 2021 – Aug 2021
Software Engineering Intern, BLAW Search New York, NY
- Developed and implemented two novel, zero-shot classification approaches for short text using LEGAL-BERT, achieving 67% performance on the test set (accuracy) compared to human annotators

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 juniors and seniors 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

REVIEWING

Reviewer for ACL Rolling Review *November 2023 – Present*

TEACHING

Teaching Assistant, **CSE 517: (Graduate) Natural Language Processing** *Winter 2024*
University of Washington; Instructor: Yejin Choi Seattle, WA

Head Teaching Assistant, **CSE 573: (Graduate) Introduction to Artificial Intelligence** *Winter 2023*
University of Washington; Instructor: Hannaneh Hajishirzi Seattle, WA

Teaching Assistant, **CSE 473: Introduction to Artificial Intelligence** *Spring 2021 – Autumn 2023*
University of Washington, Instructor(s): Hannaneh Hajishirzi, Luke Zettlemoyer Seattle, WA

Teaching Assistant, **CSE 421: Introduction to Algorithms** *Winter 2020*
University of Washington, Instructor: Paul Beame Seattle, WA

SERVICE

Undergraduate Research Leader *2020-2022*
University of Washington Undergraduate Research Program Seattle, WA

- Presented at freshman seminars and other events to advocate for and spread awareness of undergraduate research

“Big” (Mentor) *2020-2022*
University of Washington ACM Big/Little Mentorship Program Seattle, WA

- Mentored undergraduate computer science students, 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)