Alyssa Hwang

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Modified: September 18, 2023

Education

Sept 2020–Present **University of Pennsylvania** – Philadelphia, PA
PhD in Computer and Information Science
Advisors: Andrew Head, Chris Callison-Burch

May 2020 **Columbia University** – New York, NY
BS in Computer Science
Advisor: Kathleen McKeown
Thesis: Towards Augmenting Lexical Resources for Slang and African American English

Research Interests

I develop AI assistants that effectively deliver complex information. I recently conducted an in-depth observational study to propose guidelines for adapting text instructions for voice assistants. I am currently leveraging large language models to help users fluidly navigate information while listening to audiobooks.

Honors

2023 **Penn Engineering** Outstanding Service Award

2022 **Amazon Alexa Taskbot Competition** Finalist Team

2022 **CRA-WP Grad Cohort for Women** Invited Attendee

2020 **Columbia University** Theodore R. Bashkow Award
Presented to a computer science senior who has excelled in independent projects.

2020 **National Science Foundation** Graduate Research Fellowship Program

2019 **Google** Grace Hopper Celebration Travel Scholarship

2018 **Johnson & Johnson** Summer Research Grant

2018 **Columbia University** Data Science Institute Scholars Program and Grant

2016 **Elks National Foundation** Most Valuable Student Scholarship National Finalist

Publications, Articles, and Preprints

* Equal contribution

CHI 2024

Ivie: Lightweight Anchored Explanations of Just-Generated Code
Litao Yan, **Alyssa Hwang**, Zhiyuan Wu, Andrew Head
ACM Conference on Human Factors in Computing Systems (in submission).

NLP-OSS 2023

Kani: A Lightweight and Highly Hackable Framework for Building Language Model Applications
Andrew Zhu*, Liam Dugan*, **Alyssa Hwang**, Chris Callison-Burch
Workshop for Natural Language Processing Open Source Software (co-located with EMNLP) (in submission). arXiv preprint.

arXiv 2023

Large Language Models as Sous Chefs: Revising Recipes with GPT-3
Alyssa Hwang*, Bryan Li*, Zhaoyi Hou*, Dan Roth
arXiv preprint.

DIS 2023

Rewriting the Script: Adapting Text Instructions for Voice Interaction
Alyssa Hwang, Natasha Oza, Chris Callison-Burch, Andrew Head
ACM Conference on Designing Interactive Systems.

Amazon 2022

QuakerBot: A Household Dialog System Powered by Large Language Models
Artemis Panagopoulou, Manni Arora, Li Zhang, Dimitri Cugini, Weiqiu You, Yue Yang, Liyang Zhou, Yuxuan Wang, Zhaoyi Hou, **Alyssa Hwang**, Lara Martin, Sherry Shi, Chris Callison-Burch, Mark Yatskar
Alexa Prize Taskbot Proceedings.

VarDial 2020

Towards Augmenting Lexical Resources for Slang and African American English
Alyssa Hwang, William R. Frey, and Kathleen McKeown
Workshop on NLP for Similar Languages, Varieties and Dialects (co-located with COLING).

EMNLP 2019

AMPERSAND: Argument Mining for PERSuAsive oNline Discussions
Tuhin Chakrabarty, Christopher Hidey, Smaranda Muresan, Kathy McKeown, **Alyssa Hwang**
2019 Conference on Empirical Methods in Natural Language Processing and 9th International Joint Conference on Natural Language Processing.

MWE-WN 2019

Confirming the Non-compositionality of Idioms for Sentiment Analysis
Alyssa Hwang and Christopher Hidey
Joint Workshop on Multiword Expressions and WordNet (co-located with ACL).

ArgMining 2017

Analyzing the Semantic Types of Claims and Premises in an Online Persuasive Forum
Christopher Hidey, Elena Musi, **Alyssa Hwang**, Smaranda Muresan, and Kathleen McKeown
Workshop on Argument Mining (co-located with ACL).

Industry Experience

Summer 2022   **AWS Comprehend** (Applied Scientist Intern) – New York, NY
NewsQs: Multi-Source Question Generation for the Inquiring Mind
In submission at EMNLP 2023.
Hosts: Kathleen McKeown, Kalpit Dixit

Summer 2021   **Google** (Software Engineering Intern) – Pittsburgh, PA
Image Ranking for Shopping
Hosts: Wei Wan, Tao Chen

Summer 2020   **Google** (Software Engineering Intern) – Mountain View, CA
Dialogue Act Recognition for Dialogflow
Hosts: Chuan Wang, Igor Poletaev

Invited Talks

Sept 18, 2023   **University of Pennsylvania Computational Linguistics Lunch (CLunch)**
Rewriting the Script: Adapting Text Instructions for Voice Interaction

Teaching

Fall 2022   **Head Teaching Assistant**, CIS 3990 Introduction to Human-Computer Interaction
Instructor: Danaë Metaxa (University of Pennsylvania)

Fall 2021   **Teaching Assistant**, CIS 5300 Computational Linguistics
Instructor: Mark Yatskar (University of Pennsylvania)

Spring 2020
Spring 2019   **Teaching Assistant**, COMS 4705 Natural Language Processing
Instructor: Michael Collins (Columbia University)

Fall 2019   **Teaching Assistant**, COMS 4705 Natural Language Processing
Instructor: Kathleen McKeown (Columbia University)

Summer 2018   **Teaching Assistant**, Introduction to Java
Instructor: Brandon Mazey (Columbia University Pre-college Programs)

Summer 2018	**Teaching Assistant**, Web Development in Python
	Instructor: Brandon Mazey (Columbia University Pre-college Programs)

Mentorship

Fall 2023– Spring 2024	Matthew Burke, Ryan Hsing-Smith, Bryan Yao, Joseph Koo, Sarah Batta, Zachary Arnold (Senior Design Project)
Summer 2022	Juni Kim (Independent Study)
Spring 2022	Jasmine Chen (Undergraduate Thesis)

Service

May 2022–Present	**Penn CIS PhD Mentorship Program** *Founder* Launch Mentorship Program for PhD students in the Department of Computer and Information Science at the University of Pennsylvania, where first- and second-years are matched with senior students and invited to monthly social events.
Sept 2020–Present	**Computer and Information Science Doctoral Association (CISDA)** *Co-Chair* Lead group of elected students that advocates for student interests and liaises with faculty leaders of the Department of Computer and Information Science and School of Engineering and Applied Science.
Sept 2022– May 2023	**Department of Computer and Information Science Office Committee** *PhD Representative* Coordinate seat assignments and other office logistics for CIS PhD students.
Sept 2021– May 2022	**Penn Engineering Dean's Doctoral Advisory Board** *PhD Representative* Represent PhD students of the Department of Computer and Information Science at monthly meetings with Associate Dean for Graduate Programs Boon Thau Loo.
Sept–Dec 2021	**Penn NLP Computational Linguistics Lunch (CLunch)** *Co-organizer* Coordinate speakers for Computational Linguistics seminar series.

Mar–Oct 2021	**MindCORE *Di*versity and *E*quity *In*itiative (DivE In)**
	Programming Development Committee Lead
	Lead the Programming Development and sit on Steering Committees for the inaugural DivE In, a fully funded weekend of workshops for underrepresented undergraduates who are interested in the mind sciences. Media coverage on OMNIA.
Sept–Dec 2020	**Penn CIS Applicant-Support Program**
	Program Leader
	Match underrepresented PhD applicants with current Penn CIS PhD students for mentorship throughout application process. Media coverage on Penn CIS Highlights.

Outreach

Sept 2023	**University of Pennsylvania Department of Computer and Information Science**
	Invited Panelist, PhD New Student Orientation
Nov 2022	**MindCORE *Di*versity and *E*quity *In*itiative (DivE In)**
	Invited Speaker, Overview of the PhD Application Process
Nov 2021	**University of Pennsylvania School of Engineering and Applied Science**
	Invited Panelist, PhD Open House
Mar 2021	**ACM Capital Region Celebration of Women in Computing (CAPWIC)**
	Invited Panelist, Graduate School: Is It Right for Me?
Jan 2021	**University of Pennsylvania School of Engineering and Applied Science**
	Invited Panelist, Graduate Recruitment Panel
Nov 2020	**University of Pennsylvania School of Engineering and Applied Science**
	Invited Panelist, PhD Open House
Oct 2020	**Columbia University Department of Computer Science**
	Invited Speaker, Alumni-In-Residence Discussion