Mert İnan

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Education

- **Northeastern University** — Boston, MA
  Ph.D. in Computer Science (Khoury College of Computer Science) — *2023 – present*
  - Advisor: Dr. Malihe Alikhani
  - Cumulative GPA: 4.00/4.00
- **University of Pittsburgh (transferred out)** — Pittsburgh, PA
  Ph.D. in Computer Science (School of Computing and Information) — *2020 – 2023*
  - Advisor: Dr. Malihe Alikhani
  - Co-Organizer of PittNLPSeminar series. [website]
  - Co-Organizer of NSF Dialogue with Robots Workshop. [website]
- **Carnegie Mellon University** — Pittsburgh, PA
  M.Sc. in Computational Biology (School of Computer Science) — *2018 – 2020*
  - Awarded with Fulbright Master's Scholarship
  - Cumulative QPA: 3.91/4.00
  - Research Track, Advisor: Prof. Tai-Sing Lee
- **Bilkent University** — Ankara, Turkey
  B.Sc. in Computer Science — *2014 – 2018*
  - Cumulative GPA: 3.83/4.00
  - Graduated **second** in rank, with Summa Cum Laude. Top 1%.

Publications

1) Saki Imai, **Mert Inan**, Anthony Sicilia, Malihe Alikhani. *"SiLVERScore: Semantically-Aware Embeddings for Sign Language Generation Evaluation"*. RANLP (2025). [PDF]
2) Saki Imai, **Mert Inan**, Anthony Sicilia, Malihe Alikhani. *"Measuring How (Not Just Whether) VLMs Build Common Ground"*. RANLP (2025). [PDF]
3) **Mert Inan**, Anthony Sicilia, Malihe Alikhani. *"SignAlignLM: Integrating Multimodal Sign Language Processing into Large Language Models"*. ACL (2025). [PDF]
4) **Mert Inan**, Yang Zhong, Malihe Alikhani. *"How to Align Multiple Signed Language Corpora for Better Sign-to-Sign Translations?"*. NAACL (2025). [PDF]
5) **Mert Inan**, Anthony Sicilia, Suvodip Dey, Vardhan Dongre, Tejas Srinivasan, Jesse Thomason, Gökhan Tür, Dilek Hakkani-Tür, Malihe Alikhani. *"Better Slow than Sorry: Introducing Positive Friction for Reliable Dialogue Systems"*. TACL (2025). [PDF]
6) Anthony Sicilia, **Mert Inan**, Malihe Alikhani. *"Accounting for Sycophancy in Language Model Uncertainty Estimation"*. NAACL (2025). [PDF]
7) **Mert Inan**, Katherine Atwell, Anthony Sicilia, Lorna Quandt, Malihe Alikhani. *"Generating Signed Language Instructions in Large-Scale Dialogue Systems"*. NAACL (2024). [PDF]
8) Casey Kennington, Malihe Alikhani, Heather Pon-Barry, Katherine Atwell, Yonatan Bisk, Daniel Fried, Felix Gervits, Zhao Han, **Mert Inan**, Michael Johnston, Raj Korpan, Diane Litman, Matthew Marge, Cynthia Matuszek, Ross Mead, Shiwali Mohan, Raymond Mooney, Natalie Parde, Jivko Sinapov, Angela Stewart, Matthew Stone, Stefanie Tellex, Tom Williams *"Dialogue with Robots: Proposals for Broadening Participation and Research in the SLIVAR Community"*. arXiv (2024). [White Paper PDF]

9) Katherine Atwell, **Mert Inan**, Anthony B Sicilia, Malihe Alikhani *"Combining Discourse Coherence with Large Language Models for More Inclusive, Equitable, and Robust Task-Oriented Dialogue"*. LREC-COLING (2024). [PDF]
10) **Mert Inan**, Malihe Alikhani *"Seeing Eye-to-Eye: Cross-Modal Coherence Relations Inform Eye-gaze Patterns During Comprehension Production"*. LREC-COLING (2024). [PDF]
11) Maneesh Bilalpur, **Mert Inan**, Dorsa Zeinali, Jeffrey F Cohn, Malihe Alikhani. *"Learning to Generate Context-Sensitive Backchannel Smiles for Embodied AI Agents with Applications in Mental Health Dialogues"*. ML4CMH, AAAI (2024). [PDF]
12) Anthony Sicilia, Yuya Asano, Katherine Atwell, Qi Cheng, Dipunj Gupta, Sabit Hassan, **Mert Inan**, Jennifer Nwogu, Paras Sharma, Malihe Alikhani. *"ISABEL: An Inclusive and Collaborative Task-Oriented Dialogue System"*. Amazon Science Proceedings (2023). [PDF]
13) **Mert Inan***, Qi Cheng*, Rahma Mbarki, Grace Grmek, Theresa Choi, Yiming Sun, Kimele Persaud, Jenny Wang, Malihe Alikhani. *"Learning Multimodal Cues of Children's Uncertainty"* SIGDIAL (2023). [PDF]
14) **Mert Inan**, Aishwarya Padmakumar, Spandana Gella, Patrick Lange, Dilek Hakkani-Tür. *"Multimodal Contextualized Plan Prediction for Embodied Task Completion"* EMNLP NILLI Workshop (2022). [PDF]
15) **Mert Inan**, Malihe Alikhani. *"Grounding Novel Utterances in Visual Dialogue"* SemDial (2022). [PDF]
16) Malihe Alikhani, Thomas Kober, Bashar Alhafni, Yue Chen, **Mert Inan**, Elizabeth Nielsen, Shahab Raji, Mark Steedman, Matthew Stone. *"Zero-shot Cross-Linguistic Learning of Event Semantics"* INLG (2022). [PDF]
17) **Mert Inan***, Yang Zhong*, Sabit Hassan, Lorna Quandt, Malihe Alikhani. *"Learning cognitive and linguistic prosodic categories for automatic cross-lingual sign language understanding"* COGSCI (2022). [Abstract]
18) **Mert Inan***, Yang Zhong*, Sabit Hassan*, Lorna Quandt, Malihe Alikhani. *"Modeling Intensification for Sign Language Generation: A Computational Approach"* ACL Findings (2022). [PDF]
19) Carla Viegas, **Mert İnan**, Lorna Quandt, Malihe Alikhani. *"Including Facial Expressions in Contextual Embeddings for Sign Language Generation"* arXiv Preprint (2022). [PDF]
20) **Mert Inan**, Piyush Sharma, Baber Khalid, Radu Soricut, Matthew Stone and Malihe Alikhani. *"COSMic: A Coherence-Aware Generation Metric for Image Descriptions."* EMNLP (2021). [PDF]
21) Thomas A. W. Bolton, Younes Farouj, **Mert Inan**, Dimitri Van De Ville, *Structurally-Informed Deconvolution of Functional Magnetic Resonance Imaging Data*. IEEE ISBI (2019). [Abstract]
22) Thomas A. W. Bolton, **Mert Inan**, Dimitri Van De Ville, *Revealing directional cross-regional functional interplays with sparse coupled hidden Markov models*. OHBM (2019).

Research Experience

- **Sign Language Generation** Apple AIML
  Machine Learning Intern, *May 2025 – Aug 2025*
  Vassilis Baltatzis, Raja Kushalnagar, Lorna Quandt, Colin Lea, Leah Findlater
  - Building state-of-the-art ASL generation systems which are discourse–aware.
  - Project selected to be presented to John Gianandrea as promising ML directions.
- **BRIDGE: Collaborative Learning for Deaf Students** Northeastern & Gallaudet University
  Graduate Research Assistant, *Jan 2025 – present*
  Malihe Alikhani, Erin Walker, Jacob Biehl, Alicia Wooten, Lorna Quandt
  - In this project, we build sign recognition and generation models that can work for novel STEM signs, especially in collaborative learning settings.
  - This project is funded by NSF.

- **BECAREFUL: Positive Friction in Dialogue** Northeastern University, UIUC, USC
  Graduate Research Assistant, *Aug 2024 – present*
  Malihe Alikhani, Jesse Thomason, Gokhan Tur, Dilek Hakkani-Tur
  - This project aims to enhance decision-making mechanisms for conversational embodied AI agents by reducing user over-reliance on possible misinformation from AI systems.
  - This project is funded by DARPA FACT Grant.
- **Ambiguity in Coding Dialogues** Northeastern University, CMU
  Graduate Research Assistant, *Dec 2024 – present*
  Anthony Sicilia, Alex Xie, Saujas Vaduguru, Daniel Fried, Malihe Alikhani
  - Quantifying and evaluating ambiguity in pair programming dialogues with LLMs for data visualization codes augmented with theories of discourse and pragmatics.
- **Multimodal Dialogue with Eye Gaze** Northeastern University
  Graduate Research Assistant, ***Malihe Alikhani*** *Aug 2022 – present*
  - Collecting a dataset on human eye gaze for understanding the coherence between an image and its caption.
- **Multimodal Embodied Plan Prediction** Amazon Alexa AI
  Applied Scientist Intern, *May 2022 – Aug 2022*
  Aishwarya Padmakumar, Spandana Gella, Dilek Hakkani-Tur
  - Developing a multimodal plan prediction model with execution assistance for the TEAch Dataset.
- **Lexical Innovation in Multimodal Dialogue** University of Pittsburgh
  Graduate Research Assistant, ***Malihe Alikhani*** *January 2022 – May 2022*
  - Developing a multimodal dialogue system that is cognitive-aware with a focus on lexical innovation using the Photobook Dataset.
- **Sign Language Generation** Northeastern University
  Graduate Research Assistant, ***Malihe Alikhani*** *May 2021 – present*
  - Led research on modeling intensification in sign language for generation using Transformers, with an interdisciplinary team of cognitive scientists, neuroscientists and American Sign Language users. Submitted papers to AAAI 2022 and ACL 2022.
- **Discourse-Aware Evaluation Metric for Image Captions** University of Pittsburgh
  Graduate Research Assistant, ***Malihe Alikhani*** *Aug 2020 – Sep 2021*
  - Primary contributor of research with Google AI, Rutgers University and University of Pittsburgh to develop an image caption generation metric that is coherence-aware.
- **Aspectuality in Image Captions for Turkish** University of Pittsburgh
  Graduate Research Assistant, ***Malihe Alikhani*** *Aug 2020 – present*
  - Annotated Turkish image captions in and analyzed the aspectuality and time aspect of captions compared to Wikipedia sentences.
- **Deep Learning in Visual Cortex** Carnegie Mellon University
  Graduate Research Assistant, ***Tai-Sing Lee*** *Dec 2018 – May 2020*
  - Modeled visual cortex V1 using Mean-Field Restricted Boltzmann Machines with sparse coding. Found the bug of high DC issue in the previous model. Supported by an NSF grant.
- **Human Functional MRI & Machine Learning** EPFL & Campus Biotech
  Undergraduate Research Intern, ***Dimitri Van de Ville*** *Aug 2017 – Sep 2017*
  - Improved and implemented Markov models to understand neural connections between different parts of the brain in fMRI scans.
- **Reaction-Diffusion on BioNetGen** Carnegie Mellon University
  Graduate Research Assistant, ***Phillip Compeau*** *May 2019 – Oct 2019*
  - Implemented a Gray-Scott reaction diffusion system and visualized it in 3D using BioNetGen and CellBlender. Created a teaching module explaining the steps.Supported by an NIH grant.

Academic Service

- **ORIGen Workshop** COLM 2025
  Organizer. [website]
- **CoNLL 2024 Conference** EMNLP 2024
  Publication Chair. [website]
- **Dialogue with Robots** University of Pittsburgh, NSF-funded Workshop
  Organizer. [website] [white paper]
- **SpLU-RoboNLP 2024 Workshop** ACL 2024
  Organizer. [website]
- **SpLU-RoboNLP 2023 Workshop** EMNLP 2023
  Organizer. [website]
- ***SEM 2023 Workshop** ACL 2023
  Organizer (Publicity Chair). [website]
- **SpaVLE Workshop** NeurIPS 2025
  Reviewer. [website]
- **WMT Main** Aug 2025
  Reviewer. [website]
- **Frontiers in Artifical Intelligence** Jun 2025
  Reviewer. [website]
- **DialDoc 2021 Workshop** ACL 2021
  Reviewer and Program Committee member. [website]
- **Special Track on AI for Social Impact** AAAI 2022
  Reviewer. [website]
- **CogSci Main Program** CogSci 2022
  Reviewer. [website]
- **ACL Rolling Review** ARR '22, '23, '24, '25
  Reviewer & Emergency Reviewer. [website]
- **AI for Social Impact** AAAI 2023
  Reviewer. [website]

Teaching Experience

- **Introduction to NLP Course TA** Northeastern University
  Graduate Teaching Assistant, Khoury School of Computer Science *Sep 2025 – Dec 2025*
- **Introduction to Computer Graphics Course TA** Northeastern University
  Graduate Teaching Assistant, Khoury School of Computer Science *Sep 2023 – Dec 2023*
- **Introduction to NLP Course TA** University of Pittsburgh
  Graduate Teaching Assistant, Computer Science Department *Jan 2023 – May 2023*
- **Introduction to Data Science Course TA** University of Pittsburgh
  Graduate Teaching Assistant, Computer Science Department *Sep 2022 – Dec 2022*
- **Theory of Computation Course TA** University of Pittsburgh
  Graduate Teaching Assistant, Computer Science Department *Jan 2022 – May 2022*
- **Algorithms and Data Structures 2 Course TA** University of Pittsburgh
  Graduate Teaching Assistant, Computer Science Department *Jan 2022 – May 2022*
- **Formal Methods in Computer Science Course TA** University of Pittsburgh
  Graduate Teaching Assistant, Computer Science Department *Sep 2020 – Dec 2021*
- **Computational Perception Course TA** Carnegie Mellon University
  Graduate Teaching Assistant, Computer Science Department *Aug 2019 – Dec 2019*

Awards, Grants & Honours

NSF Grant #2418664 ($50 000) 2025
DARPA FACT Grant DARPA-PA-23-04-02 ($50 000) 2024
Amazon Alexa Prize TaskBot Challenge 2 Third Place Winner ($50 000) 2023
Amazon Alexa Prize TaskBot Challenge 2 Research Grant ($500 000) 2023
Assistantship (University of Pittsburgh) ($20 000) . . . . . 2020 – 2022
Fulbright Master's Grant (U.S. Department of State) ($100 000) . . . . . 2018 – 2020
Merit Fellowship (Carnegie Mellon University) ($9 000) . . . . . 2018 – 2020
Summa Cum Laude (Bilkent University) 2018
Merit Scholarship (Bilkent University) (₺70 000) . . . . . 2015 – 2016
High Honor Student (Bilkent University) . . . . . 2014 – 2018

Mentorship

Saki Imai, Northeastern University, CS Ph.D. Student . . . . . 2024 – Now
Asteria Kaberlein, Northeastern University, CS Ph.D. Student . . . . . 2024 – Now
Vidya Ganesh, CS M.Sc. at Northeastern University, now: ML Engineer at Qualitrics 2023 – 2024
Jennifer Nwogu, University of Pittsburgh, Inf. Sci. Ph.D. Student . . . . . 2023 – 2023
Dipunj Gupta, CS M.Sc. at University of Pittsburgh, now: SWE at Cloudfare . . . 2023 – 2023
Qi Cheng, University of Pittsburgh, CS Ph.D. Student . . . . . 2022 – 2023
Yang Zhong, University of Pittsburgh, CS Ph.D. Student . . . . . 2021 – 2023
Joffin Manjaly, CS B.Sc. at University of Pittsburgh, ... 2021 – 2022
Urjeet Deshmukh, CS B.Sc. at University of Pittsburgh, now: SWE at Amazon . . 2021 – 2022
Xueyan (Julie) Niu, Summer Research Student at CMU, now: Ph.D. at NYU . . . 2019 – 2020

Skills, Toolkits & Languages

- **Computational Toolkit:** PyTorch, HuggingFace, TensorFlow, NLTK, Keras, Rasa, Python, MATLAB, C, C++, Java, Go, Bash, Linux, SLURM, tmux, vim, CUDA, Blender, CellBlender, mcell, BioNetGen, HTML/XML, SQL, JavaScript
- **Human Languages:** Türkçe, English, Français, 日本語, 中文, ქართული, American Sign Language