

SETAREH NASIHATI GILANI

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- RESEARCH INTERESTS
- ◇ **Natural Language Dialogue Systems**
 - ◇ **Multimodal Dialogue Management**
 - ◇ **Multimodal Human Computer Interaction**

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- EDUCATION
- ◇ **Ph.D. in Computer Science** 2023
University of Southern California (USC), Los Angeles, CA, United States
SUPERVISOR: David Traum
 - ◇ **Master's Degree in Computer Science** 2018
University of Southern California (USC), Los Angeles, CA, United States
 - ◇ **B.Sc. Degree in Computer Engineering** 2014
Sharif University of Technology, Tehran, Tehran, Iran

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- PUBLICATIONS
- ◇ **Multimodal Prediction of User's Performance in High-Stress Dialogue Interactions** **ICMI'23**
Setareh Nasihati Gilani, Kimberly Pollard, David Traum. In *ACM International Conference on Multimodal Interaction*. Paris, France. Oct. 2023.
 - ◇ **Common Strategy Patterns of Persuasion in a Mission Critical and Time Sensitive Task** **SemDial'23**
Claire To, Setareh Nasihati Gilani, David Traum. In *Proceedings of the 27th Workshop on the Semantics and Pragmatics of Dialogue*. Maribor, Slovenia. Aug. 2023.
 - ◇ **Analyzing User's Mental State and Facial Expressions in Interaction with Different Personalities in a Critical Situation** **MMSYM'23**
Setareh Nasihati Gilani, David Traum. In *1st International Multimodal Communication Symposium* Apr. 2023.
 - ◇ **Human swarm interaction using plays, audibles, and a virtual spokesperson** **SPIE'20**
Patricia Chaffey, Ron Artstei, Kallirroi Georgila, Kimberly A. Pollardy, Setareh Nasihati Gilani, David M. Krum, David Nelson, Kevin Huynh, Alesia Gainer, Seyed Hossein Alavi, Rhys Yahata, David Traum. In *Artificial Intelligence and Machine Learning for Multi-Domain Operations Applications II, vol. 11413, p. 114130V. International Society for Optics and Photonics*. CA, USA. Apr. 2020.
 - ◇ **Multimodal Learning for Identifying Opportunities for Empathetic Responses** **ICMI'19**
Leili Tavabi, Kalin Stefanov, Setareh Nasihati Gilani, David Traum, Mohammad Soleymani. In *ACM International Conference on Multimodal Interaction*. Suzhou, Jiangsu, China. Oct. 2019.
 - ◇ **Can a Signing Virtual Human Engage a Baby's Attention?** **IVA'19**
Setareh Nasihati Gilani, David Traum, Rachel Sortino, Grady Gallagher, Kailyn Aaron-Lozano, Cryst Padilla, Ari Shapiro, Jason Lambertson, Laura-Ann Petitto. In *International Conference on Autonomous Agents & Multiagent Systems*. Paris, France. July 2019.

- ◇ **Can a Virtual Human Facilitate Language Learning in a Young Baby?** **AAMAS'19**
Setareh Nasihati Gilani, David Traum, Rachel Sortino, Grady Gallagher, Kailyn Aaron-Lozano, Cryss Padilla, Ari Shapiro, Jason Lamberton, Laura-Ann Petitto. In *International Conference on Autonomous Agents and Multiagent Systems*. Montréal, Canada. May 2019.
- ◇ **Developing a Virtual Reality Wildfire Simulation to Analyze Human Communication and Interaction with a Robotic Swarm During Emergencies** **HLTCEM'19**
Patricia Chaffey, Ron Artstein, Kallirroi Georgila, Kimberly A. Pollardy, Setareh Nasihati Gilani, David M. Krum, David Nelson, Kevin Huynh, Alesia Gainer, Seyed Hossein Alavi, Rhys Yahata, David Traum. In *Workshop on Human Language Technologies in Crisis and Emergency Management*. Poznań, Poland. May 2019.
- ◇ **Hearing Babies Respond to Language's Patterning and Social Contingency with a Signing Avatar: Acquisition Insights** **SRCD'19**
Laura-Ann Petitto, Rachel Sortino, Kailyn Aaron-Lozano, Grady Gallagher, Setareh Nasihati Gilani, David Traum, Arcangelo Merla, Chiara Filippini, Cryss Padilla. In *Society for Research in Child Development*. Baltimore, Maryland, United States. Apr. 2019.
- ◇ **Multimodal Dialogue Management for Multiparty Interaction with Infants** **ICMI'18**
Setareh Nasihati Gilani, David Traum, Arcangelo Merla, Eugenia Hee, Zoey Walker, Barbara Manini, Grady Gallagher, Laura-Ann Petitto. In *ACM International Conference on Multimodal Interaction*. Boulder, Colorado, United States. Oct. 2018. **Best Paper Award**.
- ◇ **Artificial Intelligence to Predict Intimate Partner Violence Perpetration** **Cambridge Press**
Robin Petering, Mee-Young Um, Nazanin Alipourfard, Nazgol Tavabi, Rajni Kumari, Setareh Nasihati Gilani. Chapter in *Artificial Intelligence and Social Work*. Cambridge University Press. Sept. 2018.
- ◇ **Teaching Language to Deaf Infants with a Robot and a Virtual Human** **CHI'18**
Brian Scassellati, Jake Brawer, Katherine Tsui, Setareh Nasihati Gilani, Melissa Malzkuhn, Barbara Manini, Adam Stone, Geo Kartheiser, Arcangelo Merla, Ari Shapiro, David Traum, Laura-Ann Petitto. In *ACM Conference on Human Factors in Computing Systems*. Montréal, Canada. Apr. 2018.
- ◇ **What Kind of Stories Should a Virtual Human Swap?** **IVA'16**
Setareh Nasihati Gilani, Kraig Sheetz, Gale Lucas, David Traum. In *International Conference on Intelligent Virtual Agents*. Los Angeles, California, United States. Sept. 2016.
- ◇ **What Kind of Stories Should a Virtual Human Swap?** **AAMAS'16**
Setareh Nasihati Gilani, Kraig Sheetz, Gale Lucas, David Traum. In *International Conference on Autonomous Agents and Multiagent Systems*. Singapore. May 2016.

HONORS AND AWARDS	<ul style="list-style-type: none"> ◇ Best Paper Award October 2018 In ACM International Conference on Multimodal Interaction (ICMI 2018). ◇ Co-inventor in a USC invention disclosure August 2021 Track Code: D2022-0011; Title: Human Swarm Interaction Simulation Environment ◇ MS Research Award November 2018 Microsoft Research External Funding Department For Contributing to Platform for Situated Intelligence (PSI). ◇ Honorable Mention February 2015 In USC Registration Application contest for designing a multi-platform mobile application with innovative ways for course registration.
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- ◇ **Gifted Student Award** July 2014
Sharif University of Technology
And acceptance to graduate program without participating in the nationwide entrance exam.
 - ◇ **Ranked 37th (Top 0.0001)** July 2010
In the nationwide university entrance exam (Konkoor), Physics and Mathematics Discipline, among more than 300,000 participants, Iran.
 - ◇ **Grant for Undergraduate Studies** 2010-2014
Iranian National Elites Foundation, for outstanding academic success.
 - ◇ **Membership** 2006-2010
Member of National Organization for Development of Exceptional Talents (NODET), Iran.
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RESEARCH
EXPERIENCE

- ◇ **Institute for Creative Technologies, Research Assistant** Spring 2015 - Present
University of Southern California, Los Angeles, California, United States.
PROJECT DESCRIPTION: Focused on multimodal feedback understanding and generation in dialogue systems using inference of real-time sensory data
SUPERVISOR: David Traum
 - ◇ **Information Science Institute, Research Assistant** Fall 2014
University of Southern California, Los Angeles, California, United States.
PROJECT DESCRIPTION: Worked on fault-tolerant systems, distributed systems and establishing resilience in them.
SUPERVISOR: Pedro Diniz
 - ◇ **Performance and Dependability Lab, Research Assistant** 2013-July 2014
Department of Computer Engineering, Sharif University, Tehran, Tehran, Iran
PROJECT DESCRIPTION: Worked on Named Data Networks
SUPERVISOR: Ali Movaghar
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WORK
EXPERIENCE

- ◇ **Motorola Solutions Inc, Software Engineer Co-op** June 2023 - Present
Los Angeles, CA, United States.
PROJECT DESCRIPTION: Improving the Intercom Voice-AI performance by training custom speech to text models
SUPERVISOR: Amir Khakpour
- ◇ **Google LLC, Research Intern** August 2020 - November 2020
New York, New York, United States. (Working Remotely)
PROJECT DESCRIPTION: Developing a preference-based conversational recommender system for Google Assistant.
SUPERVISORS: Kostya Yatsenko, Eric Zhu
- ◇ **Angama Health Inc, Researcher** May 2020 - Aug 2020
Atlanta, US. (Working Remotely)
PROJECT DESCRIPTION: COVID-19 AI-enabled text chatbot for combating the pandemic & post-pandemic via digital health
SUPERVISOR: Marlon Parris
- ◇ **PayPal Inc, Software Engineering Intern** Summer 2017
San Jose, California, United States.
PROJECT DESCRIPTION: Developed an email-routing system to improve customer service's operation

efficiency using text analytics and machine learning.

SUPERVISOR: Ravi Retineni

- ◇ **PayPal Inc, Software Engineering Intern** Summer 2016
San Jose, California, United States.
PROJECT DESCRIPTION: Developed an internally facing metadata resource management conversational agent for engineers to expedite information gaining process.
SUPERVISOR: Gaoyuan Wang
- ◇ **Beep Comapany, Product Specialist and Mobile Application Developer** Summer 2013
Tehran, Tehran, Iran.
PROJECT DESCRIPTION: Co-founded a mobile application start-up; a trivia game based on Persian songs. Beep (Rahnema) is one of the major VAS providers and tech companies in Iran.
SUPERVISOR: Farid Khareshi

TEACHING
EXPERIENCE

- ◇ **Teaching Assistant, University of Southern California**
 - “Natural Language Processing” Course Spring 2022, Fall 2022
 - “Natural Language Dialogue Systems” Course Fall 2018
 - “Analysis of Algorithms” Course Summer 2021
 - “Web Technologies” Course Summer 2020
 - “Foundations of AI” Course Spring, Summer, Fall 2015; Spring, Fall 2020, Spring 2021
 - “Database Systems” Course Summer 2021
 - “Compiler Design” Course Spring 2015
- ◇ **Teaching Assistant, Sharif University of Technology**
 - “Data Structures and Introduction to Algorithm” Course Fall 2012, Fall 2013
 - “Computer Architecture” Course Spring 2013

PROFESSIONAL
SERVICES

- ◇ **Conference Peer Reviewer**
 - *The 29th International Conference on Computational Linguistics (Coling’22).*
 - *The 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP’20).*
 - *The 18th International Conference on Autonomous Agents and Multiagent Systems (AAMAS’19).*
 - *The 57th Annual Meeting of the Association for Computational Linguistics (ACL’19).*
 - *The 10th International Workshop on Spoken Dialogue Systems Technology (IWSDS’19).*
 - *The 17th Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT’19).*
 - *The 32nd International The Florida Artificial Intelligence Research Society Conference (FLAIRS’19).*
- ◇ **Python Workshop Leader and Mentor**
Tutorial Instructor in AIHacks: Southern California’s All-Female High School Hackathon 2019
- ◇ **Student Volunteer**
The 17th Annual Meeting of the Special Interest Group on Discourse and Dialogue (SIGDIAL’16)

- ◇ **Technical Staff**
In 13th ACM/ICPC Asia Region 2012

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| UNIVERSITY SERVICES | ◇ President
USC Iranian Graduate Student Association (IGSA) | 2017-2019 |
| | ◇ Board Member
USC Iranian Graduate Student Association (IGSA) | 2015-2017 |
| | ◇ Board Member
Student Scientific Chapter (SSC) of Computer Engineering Department in Sharif University | 2012 |

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| TECHNICAL EXPERTISE | ◇ Programming Languages: Python, Java, C/C++, SQL, Prolog, LISP, MATLAB |
| | ◇ Web Programming Languages: HTML, CSS, JavaScript, PHP |
| | ◇ Machine Learning and Deep Learning: Torch, TensorFlow, Keras, HuggingFace, Scikit-Learn, NLTK, Spacy |
| | ◇ Platforms: PSI, Android, Azure, AWS, GCP |
| | ◇ Development Environments : Visual Studio, IntelliJ, Android Studio, Pycharm |

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| PRESS COVERAGE | ◇ USC Viterbi, May 2019
Robotics and American Sign Language |
| | ◇ Wired Magazine, December 2017
The Adorable Robot That's Helping Deaf Children Communicate |
| | ◇ NewsWeek, October 2017
Could a Robot Help Your Child Learn a Language? |
| | ◇ Axios, February 2018
Artificial Intelligence is helping babies develop language |
| | ◇ HearingLikeMe website, January 2018
Could a robot help deaf children communicate in the near future? |