

SAGHAR HOSSEINI

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I am a senior research scientist at Language and Information Technologies (LIT) team at Microsoft Research. I am generally interested in artificial intelligence and creating reliable and fair natural language and information technologies. In the past few years, my research has been focused on **building Natural Language Understanding (NLU) systems** and tackling **out-of-distribution** challenges in these systems. Some of these challenges are **domain adaptations**, **compositional generalization**, and **transferring societal biases in multi-lingual transfer techniques and language models**.

EXPERIENCE

AUGUST 2016 – PRESENT

SENIOR RESEARCHER, MICROSOFT RESEARCH, REDMOND, WA

As a researcher in our team, I work in a small team of scientists and engineers, collaborating closely with other research and product teams across Microsoft. I work with cutting-edge technology on highly visible and impactful projects that aim to bring intelligence with clear user value to existing and new Microsoft products. I participate in research to advance the state of the art in machine learning and language understanding technologies. I deploy machine learning models in production environments and publish in top tier conferences (e.g., ACL, WWW, NIPS, ICML, SIGIR, etc.)

JUNE 2014 – SEPTEMBER 2014

RESEARCH INTERN, MICROSOFT RESEARCH, REDMOND, WA

I worked with Misha Bilenko, Kenneth Tran, and Lin Xiao on implementing a fast and reliable algorithm for learning on large scale data sets, called Stochastic Dual Coordinate Ascent (SDCA), to be included in the **Microsoft Azure**.

JUNE 2016 – JULY 2016

RESEARCH SCIENTIST III, UNIVERSITY OF WASHINGTON, SEATTLE, WA

I developed online algorithms for community detection and topology estimation in large time-varying social networks based on mixed membership model and opinion dynamics.

SEPTEMBER 2011 – MARCH 2016

GRADUATE RESEARCH ASSISTANT, UNIVERSITY OF WASHINGTON, SEATTLE, WA

I developed online distributed optimization algorithms and worked on distributed machine learning algorithms and their applications in large scale networks under the guidance of Professor Mehran Mesbahi.

EDUCATION

MARCH 2016

PHD, AERONAUTICS, UNIVERSITY OF WASHINGTON, SEATTLE, WA

I received the Amelia Earhart fellowship award from Zonta International Foundation twice. This fellowship is awarded to 35 fellows around the globe each year who are pursuing advanced studies in the aerospace-related sciences. I received the Graduate School Top Scholars Award from University of Washington and the best session presentation award from American Control conference.

SEPTEMBER 2011

MASTER OF SCIENCE, AERONAUTICS, UNIVERSITY OF CALIFORNIA, IRVINE, CA

I received three graduate fellowship awards from University of California and one award from the Society of Women Engineers.

SEPTEMBER 2008

BACHELOR OF SCIENCE, AERONAUTICS, SHARIF UNIVERSITY OF TECHNOLOGY, TEHRAN, IRAN

I was a member of Sharif University's swimming team and participating in competitions.

SELECTED PUBLICATIONS

For a full list of publications see <https://scholar.google.com/citations?user=XhTT61UAAAJ&hl=en>

- Saghar Hosseini, Guoqing Zheng, Ahmed Hassan Awadallah, "A Benchmark for Multilingual Text-to-SQL", Transactions of the Association for Computational Linguistics (TACL), December 2021 (in preparation)
- Subhabrata (Subho) Mukherjee, Xiaodong Liu, Guoqing Zheng, Saghar Hosseini, Hao Cheng, Greg Yang, Chris Meek, Ahmed H. Awadallah, Jianfeng Gao, "CLUES: Few-Shot Learning Evaluation in Natural Language Understanding", NeurIPS 2021, December 2021
- Saghar Hosseini, Yu Su, Ahmed Hassan Awadallah, "Compositional Generalization in Natural Language Interfaces to Web APIs", The Web Conference 2022 (submitted)
- Meghana Moorthy, Saghar Hosseini, Ahmed Hassan Awadallah, Paul Bennett, Weisheng Lee, "Say 'YES' to Positivity: Detecting Toxic Language in Workplace Communications", EMNLP 2021
- Jieyu Zhao, Subhabrata (Subho) Mukherjee, Saghar Hosseini, Kai-Wei Chang, Ahmed Hassan Awadallah, "Gender Bias in Multilingual Embeddings and Cross-Lingual Transfer", Annual Conference of the Association for Computational Linguistics (ACL 2020), July 2020
- Ahmed Elgohary, Saghar Hosseini, Ahmed Hassan Awadallah, "Speak to your parser: Interactive Text-to-SQL with natural language feedback", Annual Conference of the Association for Computational Linguistics (ACL 2020), July 2020
- Petar Stojanov, Ahmed Hassan Awadallah, Paul Bennett, Saghar Hosseini, "On Domain Transfer When Predicting Intent in Text", NeurIPS Workshop on Document Intelligence, December 2019
- Wei Wang, Saghar Hosseini, Ahmed Hassan Awadallah, Paul Bennett, Chris Quirk, "Context-Aware Intent Identification in Email Conversations", Proceedings of the 42nd Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2019), July 2019
- Saghar Hosseini, Airlie Chapman, and M. Mesbahi, "Online Distributed Optimization on Dynamic Networks," The IEEE Transactions on Automatic Control, 2016

- Kenneth Tran, Saghar Hosseini, Lin Xiao, Thomas Finley, Mikhail Bilenko, “Scaling up stochastic dual coordinate ascent”, Proceedings of the 21th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD 2015)

SKILLS

- **Professional Activities:** Reviewer for ACL, NACL, SIGIR and WWW
- **Programming languages:** Python, C#, SQL
- **Core Technologies:** PyTorch, TensorFlow, scikit-learn