

# IMAN MIRZADEH

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## EDUCATION

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- Washington State University** Aug. 2018 - Aug. 2022  
Doctor of Philosophy, Computer Science, EECS Department  
Dissertation: “Alleviating Catastrophic Forgetting in Continual Learning”
- Washington State University** Aug. 2018 - Dec. 2020  
Master of Science, Computer Science, EECS Department  
Thesis: “Improved Knowledge Distillation for Deep Neural Networks”
- University of Tehran** Aug. 2013 - Mar. 2018  
Bachelor of Science, Information Technology Engineering, ECE Department  
Thesis: “Design and Implementation of a Deep Learning Based Question Answering System”

## EXPERIENCE

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- Apple** - Machine Learning Research Engineer May. 2023 - Present  
• Member of AI/ML.  
• Research focus: efficient Large Language Model (LLM) inference.
- Washington State University** - Graduate Research Assistant Aug. 2018 - Aug. 2022  
• Member of Embedded & Pervasive Systems Lab (EPSL).
- Google DeepMind** - Research Scientist Intern Aug. 2021 - Dec. 2021  
• Hosts: [Mehrdad Farajtabar](#)  
• Research focus: continual learning, meta learning, and multitask learning.
- Sokhan AI** - Machine Learning Engineer Aug. 2017 - Aug. 2018  
• Technical Lead. Worked on context-aware natural language understanding engine.
- Avaanegar** - Software Engineer Jan. 2016 - May 2017  
• Product: real-time streaming service with social network features.

## SELECTED PUBLICATIONS

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- ReLU Strikes Back: Exploiting Activation Sparsity in Large Language Models.**  
Twelfth International Conference on Learning Representations (ICLR), 2024.  
I. Mirzadeh, K. Alizadeh, S. Mehta, C. Del Mundo, O. Tuzel, G. Samei, M. Rastegari, & M. Farajtabar  
*\*\*Selected for oral presentation (top 1.2%).*
- LLM in a flash: Efficient Large Language Model Inference with Limited Memory.**  
ArXiv, abs/2312.11514 (preprint), 2023.  
K. Alizadeh, I. Mirzadeh, D. Belenko, K. Khatamifard, M. Cho, C. Del Mundo, M. Rastegari, & M. Farajtabar
- Architecture Matters in Continual Learning.**  
ArXiv, abs/2202.00275 (preprint), 2022.  
S.I. Mirzadeh, S. Chaudhry, D. Yin, T. Nguyen, R. Pascanu, D. Gorur, M. Farajtabar
- Wide Neural Networks Forget Less Catastrophically.**  
Thirty-ninth International Conference on Machine Learning (ICML), 2022.  
S.I. Mirzadeh, S. Chaudhry, D. Yin, H. Hu, R. Pascanu, D. Gorur, M. Farajtabar
- CL-Gym: Full-Featured PyTorch Library for Continual Learning.**  
The IEEE Conference on Computer Vision and Pattern Recognition (CVPR) Workshops, 2021.  
S.I. Mirzadeh, H. Ghasemzadeh
- Linear Mode Connectivity in Multitask and Continual Learning.**  
Ninth International Conference on Learning Representations (ICLR), 2021.  
S.I. Mirzadeh, M. Farajtabar, R. Pascanu, D. Gorur, H. Ghasemzadeh

### **Understanding the Role of Training Regimes in Continual Learning.**

Thirty-fourth Conference on Neural Information Processing Systems (**NeurIPS**), 2020.

S.I. Mirzadeh, M. Farajtabar, R. Pascanu, H. Ghasemzadeh

### **Dropout as an Implicit Gating Mechanism For Continual Learning.**

The IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**) Workshops, 2020.

S.I. Mirzadeh, M. Farajtabar, H. Ghasemzadeh

*\*\*Selected for oral presentation and received runner-up best paper award.*

### **Optimal Policy for Deployment of Machine Learning Models on Energy-Bounded Systems.**

Twenty-Ninth International Joint Conference on Artificial Intelligence (**IJCAI**), 2020.

S.I. Mirzadeh, H. Ghasemzadeh

### **Improved Knowledge Distillation via Teacher Assistant.**

Thirty-Fourth AAAI Conference on Artificial Intelligence (**AAAI**), 2020.

S.I. Mirzadeh, M. Farajtabar, A. Li, N. Levine, A. Matsukawa, H. Ghasemzadeh

## **HONORS AND AWARDS**

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(2021) Recipient of the [NeurIPS 2021 Outstanding Reviewer Award](#) given to the top 8% of the reviewers.

(2020) Recipient of the [runner-up best paper award](#) in CVPR Workshop on Continual Learning.

(2020) [Top 2%](#) of stackoverflow community contributors with a positive impact on more than 1,500,000 people.

(2018) Received Fellowship for CS PhD program from Washington State University.

(2017) Best B.Sc. thesis project award in the cognitive science field of the University of Tehran.

(2013) Top 99.7th percentile in national university entrance exam among 291,956 participants.

## **INVITED TALKS**

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[The AutoML Podcast](#), May 2022.

“Continual Learning”

[ICML'21 Workshop on Theory and Foundation of Continual Learning](#), July 2021.

“Linear Mode Connectivity in Multitask and Continual Learning”

[Continual AI Seminars](#), February 2021.

“Linear Mode Connectivity in Multitask and Continual Learning”

## **PROFESSIONAL ACTIVITIES**

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**Conference Reviewer:** NeurIPS (21-23), ICML (22-23), ICLR (22-23), AISTATS'22, AAAI'22

**Journal Reviewer:** Transactions on Machine Learning Research (TMLR) (2022), Journal of Machine Learning Research (JMLR) (2022), IEEE Sensors Journal (2020), Springer Neural Processing Letters (2019)

## **SKILLS**

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<b>Programming Languages</b>	Python, C, C++, Bash, SQL
<b>Databases</b>	PostgreSQL, Redis, MongoDB, Elasticsearch
<b>Frameworks &amp; Libraries</b>	Numpy, Scipy, Pandas, Pytorch, Tensorflow, Keras, Scikit-Learn, Apache Spark, Apache Hadoop, Matplotlib, Seaborn, Spacy, Jax, Jaxline, Haiku, Optax, Flax
<b>Software Engineering Tools</b>	Git, Docker, Kubernetes