

Sina Sajadmanesh

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Education

Swiss Federal Institute of Technology (EPFL), PhD in Electrical Engineering	May 2019 – Aug 2023
Sharif University of Technology, MSc in Information Technology Engineering	Sept 2014 – Sept 2016
University of Isfahan, BSc in Computer Software Engineering	Sept 2009 – Feb 2014

Experience

Sony AI, AI Engineer – Zurich, Switzerland Oct 2023 – present

- Working on vision-language and multimodal foundation models
- Contributed to the development of a unified vision-language model supporting both image understanding and generation, from data curation to model training and evaluation
- Implemented APIs for vision foundation model inference and deployment
- Contributed to the development of various computer vision models, including object detection, depth estimation, surface normal estimation, super-resolution, denoising, and OCR
- Designed and implemented a comprehensive multi-task learning framework based on OpenMMLab libraries and PyTorch, supporting various vision tasks and architectures with mixed-precision and distributed training

Idiap Research Institute, Research Assistant – Martigny, Switzerland May 2019 – Aug 2023

- Worked as a doctoral researcher on differentially private machine learning with graph neural networks
- **3 published papers** in top-tier conferences (CCS, USENIX Security, and WSDM) with **255+ citations**
- **7 invited talks** at top universities and research institutions, including Imperial College, UIC, and Twitter
- **6 open-source projects** with **110+ stars** on GitHub
- **1 short course** taught on "Trustworthy Machine Learning" at Artificial Intelligence Doctoral Academy
- **Finalist** in CSAW Applied Research Competition for the best paper award in computer security in Europe

The Alan Turing Institute, Visiting Collaborator – London, UK Mar 2023 – Mar 2023

- Co-organized a workshop on "Privacy and Fairness in AI for Health" with 60+ attendees

Brave Software, Research Intern – Remote Mar 2022 – May 2022

- Developed a novel privacy-preserving **federated learning** framework for **neural bandit models** under client heterogeneity using PyTorch, Flower, Dask, and Tensorflow-Lite

Sharif University of Technology, Research Assistant – Tehran, Iran Nov 2014 – May 2019

- Worked on various research projects including privacy-preserving machine learning, web data science, and social and information network analysis.
- **4 published papers** in top-tier venues (WWW, TKDD, IoTJ, ASONAM) with **470+ citations**
- **5+ press releases** in top-tier media outlets, including MIT Technology Review, France 24, and The Independent
- **2 open-source projects** with **20+ stars** on GitHub
- **1 semester course** taught on "Fundamentals of Programming with Python" at Sharif University of Technology

Skills and Expertise

Foundation \& Generative Models: Vision \& Multimodal Models (ViT, CLIP, LLaVA) · Large Language Models (LLaMA, GPT, QWen) · Parameter-Efficient Fine-Tuning (LoRA) · Representation Learning (MAE, DINO)

Machine Learning Frameworks: PyTorch · Hugging Face (Transformers, PEFT, Accelerate, Datasets, TIMM) · OpenMMLabs (MMDetection, MMEncode, MMCV)

System \& Infrastructure: Distributed Training (DDP, FSDP) · Mixed Precision (AMP, BF16) · Multi-Node GPU Clusters (Slurm, BeeGFS) · Performance Profiling & Optimization (ONNX, TensorRT)

Engineering \& Tooling: Python (expert) · Bash · C++ · LaTeX. SQL. Data Processing (torchvision, NumPy, Pandas) · Environment & Packaging (uv, pyproject.toml, ruff) · DevOps & CI/CD (Docker, GitHub Actions) · Experiment Management (W&B, Neptune)

Community and Professional Service

Invited Speaker: Imperial College London (2023, 2020), University of Illinois at Chicago (2022), L3S Research Center (2022), Graph Neural Networks User Group Meetup (2021), Twitter Machine Learning Seminar (2021)

Organizing Committee: Privacy and Fairness in AI for Health [🔗](#) (2023)

Program Committee: PPAI [🔗](#) (2024), WiseML [🔗](#) (2023), PAIR2Struct [🔗](#) (2022), DPML [🔗](#) (2021)

Reviewer: TIFS [🔗](#) (2025), NeurIPS [🔗](#) (2024), IMWUT [🔗](#) (2024), TDSC [🔗](#) (2023), LoG [🔗](#) (2023, 2022), AISTATS [🔗](#) (2023), AIJ [🔗](#) (2022), TBD [🔗](#) (2021), TIST [🔗](#) (2020), SNAM [🔗](#) (2020), WWWJ [🔗](#) (2018)

Selected Publications

Stella: Subspace Learning in Low-rank Adaptation using Stiefel Manifold [🔗](#) Dec 2025
Zhizhong Li, Sina Sajadmanesh, Jingtao Li, Lingjuan Lyu
The Thirty-ninth Annual Conference on Neural Information Processing Systems (**NeurIPS**)

Argus: A Compact and Versatile Foundation Model for Vision [🔗](#) June 2025
Weiming Zhuang, Chen Chen, Zhizhong Li, Sina Sajadmanesh, et al.
The IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**)

ProGAP: Progressive Graph Neural Networks with Differential Privacy Guarantees [🔗](#) Mar 2024
Sina Sajadmanesh, Daniel Gatica-Perez
ACM International Conference on Web Search and Data Mining (**WSDM**)

GAP: Differentially Private Graph Neural Networks with Aggregation Perturbation [🔗](#) Aug 2023
Sina Sajadmanesh, Ali Shahin Shamsabadi, Aurélien Bellet, et al.
USENIX Security Symposium (**USENIX Security**)

Locally Private Graph Neural Networks [🔗](#) Nov 2021
Sina Sajadmanesh, Daniel Gatica-Perez
ACM Conference on Computer and Communications Security (**CCS**)

A Hybrid Deep Learning Architecture for Privacy-Preserving Mobile Analytics [🔗](#) May 2020
Seyed Ali Osia, Ali Shahin Shamsabadi, Sina Sajadmanesh, et al.
IEEE Internet of Things Journal (**IoTJ**)

Continuous-Time Relationship Prediction in Dynamic Heterogeneous Information Networks [🔗](#) Aug 2019
Sina Sajadmanesh, Sogol Bazargani, Jiawei Zhang, Hamid R. Rabiee
ACM Transactions on Knowledge Discovery from Data (**TKDD**)

Kissing Cuisines: Exploring Worldwide Culinary Habits on the Web [🔗](#) Apr 2017
Sina Sajadmanesh, Sina Jafarzadeh, Seyed Ali Ossia, et al.
International World Wide Web Conference Companion (**WWW**)

Predicting Anchor Links between Heterogeneous Social Networks [🔗](#) Aug 2016
Sina Sajadmanesh, Hamid R. Rabiee, Ali Khodadadi
International Conference on Advances in Social Networks Analysis and Mining (**ASONAM**)