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 and multimodal foundation models
- Co-developed a unified vision-language model supporting both image understanding and generation
- Implemented APIs for vision foundation model inference and deployment
- Developed various computer vision models, including object detection, depth estimation, surface normal estimation, super-resolution, denoising, deraining, and OCR
- Designed and implemented a unique 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 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"

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 privacy-preserving machine learning, web data science, and information network analysis
- 4 published papers in top-tier venues (WWW, TKDD, IoTJ, ASONAM) with 470+ citations
- 5+ press coverages in prominent 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"

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 (MMCV, MMEngine, MMDetection) . Experiment Management (W&B, Neptune)

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)

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**) (**Spotlight**)

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, Daniel Gatica-Perez

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**)