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 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 (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, 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**)