Sina Sajadmanesh

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EDUCATION

Swiss Federal Institute of Technology (EPFL), PhD in Electrical Engineering   Aug 2023

Sharif University of Technology, MSc in Information Technology Engineering   Sept 2016

University of Isfahan, BSc in Computer Software Engineering   Feb 2014

EXPERIENCE

Sony AI, Senior AI Engineer – Zurich, Switzerland   Dec 2025 – present
- Driving model optimization and deployment across heterogeneous hardware backends
- Owning APIs and infrastructure for large-scale vision foundation model inference and deployment
- Developing cutting-edge vision-language models for visual perception and understanding

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

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
Annual Conference on Neural Information Processing Systems (**NeurIPS**) 🌟 Spotlight (top 3%)

Argus: A Compact and Versatile Foundation Model for Vision   June 2025
Weiming Zhuang, Chen Chen, Zhizhong Li, Sina Sajadmanesh, et al.
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**)