

# 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	Jan 2026 – present
<ul style="list-style-type: none"> <li>Driving model optimization and deployment across heterogeneous hardware backends</li> <li>Developing cutting-edge vision-language models for visual perception and understanding</li> </ul>	
Sony AI, AI Engineer – Zurich, Switzerland	Oct 2023 – Dec 2025
<ul style="list-style-type: none"> <li>Designed a modular and flexible geometric optimization algorithm, enabling NeurIPS'25 spotlight paper</li> <li>Optimized Sony's Argus VFM inference through code optimization, vectorization, and TensorRT, resulting in up to <math>61\times</math> speedup across 17 vision tasks</li> <li>Developed 7 computer vision models, including object detection, depth estimation, super-resolution, and OCR, achieving SOTA or competitive results</li> <li>Architected and implemented a foundational MTL framework for Sony's Argus VFM, supporting 17 vision tasks, enabling CVPR'25 publication</li> </ul>	
Idiap Research Institute, Research Assistant – Martigny, Switzerland	May 2019 – Aug 2023
<ul style="list-style-type: none"> <li>Worked on differentially private machine learning with graph neural networks</li> <li>3 papers in top-tier conferences (CCS, USENIX Security, and WSDM) with 340+ citations</li> <li>7 invited talks at top universities and research institutions, including Imperial College, UIC, and Twitter</li> <li>6 open-source projects with 130+ stars on GitHub</li> <li>1 short course taught on "Trustworthy Machine Learning" at Artificial Intelligence Doctoral Academy</li> <li>Finalist in CSAW Applied Research Competition for the best paper award in computer security in Europe</li> </ul>	
Brave Software, Research Intern – Remote	Mar 2022 – May 2022
<ul style="list-style-type: none"> <li>Developed a novel privacy-preserving federated learning framework for neural bandit models under client heterogeneity using PyTorch, Flower, Dask, and Tensorflow-Lite</li> </ul>	
Sharif University of Technology, Research Assistant – Tehran, Iran	Nov 2014 – May 2019
<ul style="list-style-type: none"> <li>Worked on privacy-preserving machine learning, web data science, and information network analysis</li> <li>4 papers in top-tier venues (WWW, TKDD, IoTJ, ASONAM) with 490+ citations</li> <li>5+ press coverages in prominent media outlets, including MIT Technology Review, France 24, and The Independent</li> <li>2 open-source projects with 20+ stars on GitHub</li> <li>1 semester course taught on "Fundamentals of Programming with Python"</li> </ul>	

## SKILLS AND EXPERTISE

**Foundation & Generative Models:** Vision & Multimodal Models (ViT, CLIP, LLaVA) · Large Language Models (LLaMA, GPT, Qwen) · Parameter-Efficient Fine-Tuning (LoRA) · Self-Supervised 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, ruff) · DevOps & CI/CD (Docker, GitHub Actions)

## COMMUNITY AND PROFESSIONAL SERVICE

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**Invited Speaker:** Imperial College London (2023, 2020), University of Illinois at Chicago (2022), L3S Research Center (2022), GNN User Group Meetup (2021), Twitter ML Seminar (2021)

**Organizing / Program Committee:** Privacy and Fairness in AI for Health (2023), PPAI (2024), WiseML (2023), PAIR2Struct (2022), DPML (2021)

**Reviewer:** CVPR (2026), 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

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<b>StellA: Subspace Learning in Low-rank Adaptation using Stiefel Manifold</b> Zhizhong Li, Sina Sajadmanesh, Jingtao Li, Lingjuan Lyu Annual Conference on Neural Information Processing Systems (NeurIPS)  Spotlight (top 3%)	Dec 2025
<b>Argus: A Compact and Versatile Foundation Model for Vision</b> Weiming Zhuang, Chen Chen, Zhizhong Li, Sina Sajadmanesh, et al. IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)	June 2025
<b>ProGAP: Progressive Graph Neural Networks with Differential Privacy Guarantees</b> Sina Sajadmanesh, Daniel Gatica-Perez ACM International Conference on Web Search and Data Mining (WSDM)	Mar 2024
<b>GAP: Differentially Private Graph Neural Networks with Aggregation Perturbation</b> Sina Sajadmanesh, Ali Shahin Shamsabadi, Aurélien Bellet, Daniel Gatica-Perez USENIX Security Symposium (USENIX Security)	Aug 2023
<b>Locally Private Graph Neural Networks</b> Sina Sajadmanesh, Daniel Gatica-Perez ACM Conference on Computer and Communications Security (CCS)	Nov 2021
<b>A Hybrid Deep Learning Architecture for Privacy-Preserving Mobile Analytics</b> Seyed Ali Ossia, Ali Shahin Shamsabadi, Sina Sajadmanesh, et al. IEEE Internet of Things Journal (IoTJ)	May 2020
<b>Continuous-Time Relationship Prediction in Dynamic Heterogeneous Information Networks</b> Sina Sajadmanesh, Sogol Bazargani, Jiawei Zhang, Hamid R. Rabiee ACM Transactions on Knowledge Discovery from Data (TKDD)	Aug 2019
<b>Kissing Cuisines: Exploring Worldwide Culinary Habits on the Web</b> Sina Sajadmanesh, Sina Jafarzadeh, Seyed Ali Ossia, et al. International World Wide Web Conference Companion (WWW)	Apr 2017