



# Sina Sajadmanesh

 [linkedin.com/in/sajadmanesh](https://www.linkedin.com/in/sajadmanesh)  
 [sina.sajadmanesh@gmail.com](mailto:sina.sajadmanesh@gmail.com)

 (+41) 787812478  
 Zurich, Switzerland

## EDUCATION

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- Ph.D. in Electrical Engineering (GPA: 5.75 / 6) May 2019 – Aug 2023  
[Swiss Federal Institute of Technology \(EPFL\)](#), Lausanne, Switzerland
- M.Sc. in Information Technology Engineering (GPA: 18.1 / 20) Sep 2014 – Sep 2016  
[Sharif University of Technology](#), Tehran, Iran
- B.Sc. in Computer Software Engineering (GPA: 16.19 / 20) Sep 2009 – Feb 2014  
[University of Isfahan](#), Esfahan, Iran

## PROFESSIONAL EXPERIENCE

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- AI Engineer  
[Sony AI](#), Zurich, Switzerland October 2023 – Present  
*Working as a member of the Privacy-Preserving Machine Learning team to contribute to the development of secure and trustworthy AI solutions.*
  - **Developed an end-to-end open-world classification pipeline** using OpenMMLab frameworks and HuggingFace to train and test privacy-preserving **vision foundation models** for Sony's next-generation AI products.
  - **Improved the speed of training and inference** of models by optimizing the code and leveraging distributed computing.
- Research Assistant  
[Idiap Research Institute](#), Martigny, Switzerland May 2019 – August 2023  
*Worked as a doctoral researcher on privacy-preserving graph neural network (GNN) models using differential privacy to reduce privacy risks in real applications, such as recommendation systems and knowledge graphs.*
  - **published three papers** in top conferences: [CCS](#), [USENIX](#), and [WSDM](#), **received over 120 citations** since 2021 and delivered **more than 6 invited talks** at top institutions and companies, such as [Imperial College London](#), [University of Illinois](#), and [Twitter](#).
  - **Implemented locally private GNN models** using PyTorch-Geometric that enables online social networks to learn from their users' data without compromising their privacy. **Received over 38 stars and 13 forks** on [GitHub](#).
  - **Developed differentially private GNN solutions** using PyTorch-Geometric, Opacus, and Auto-DP that enables privacy-preserving training and inference of GNNs. **Received over 40 stars and 12 fork** on [GitHub](#).
  - **Finalist** in [CSAW Applied Research Competition](#) for the best paper award in computer security in Europe.
  - **Received a travel grant** to attend [CISPA Summer School 2022 on Trustworthy Artificial Intelligence](#) in Germany.
- Visiting Collaborator  
[The Alan Turing Institute](#), London, UK March 2023  
*Joined the [Safe and Ethical AI](#) group as a visiting PhD student.*
  - **Co-organized a workshop** on [Privacy and Fairness in AI for Health](#) with **11 invited speakers** from top research institutes and companies, such as Oxford, Microsoft, and DeepMind, and **over 60 attendees**.
- Research Intern  
[Brave Software](#), San Francisco, CA, USA (Remote) Mar 2022 – May 2022  
*Recruited as a member of the research team to contribute to privacy-preserving machine learning research, aiming to improve Brave Browser's ads and news recommendation systems.*
  - **Developed an experimental framework** to train and evaluate federated neural bandits under client heterogeneity using PyTorch and Flower for server-side simulation and Tensorflow-Lite for mobile clients.

■ Research Assistant

**Sharif University of Technology**, Tehran, Iran

Nov 2014 – May 2019

*Worked in the Data Science and Machine Learning Lab on a range of research projects in the areas of privacy-preserving machine learning, web data science, and social and information network analysis.*

- **published four papers** in top-tier venues, including [IEEE IoTJ](#), [ACM TKDD](#), and [TheWebConf](#), **with over 410 citations** since 2016.
- Worked on a hybrid mobile-server learning architecture based on Siamese fine-tuning and split learning to make non-private pre-trained deep learning models privacy-preserving at the inference stage.
- **Conducted large-scale data analysis** using a collection of recipes published on the web and their content, aiming to understand cuisines and culinary habits around the world. **Received media coverage** from prominent news outlets, such as [MIT Technology Review](#), [The Independent](#), and [France 24](#).
- **Developed time-aware link prediction algorithms** over heterogeneous social networks using recurrent neural networks and non-parametric machine learning.
- Received **full PhD studentship** from [IBM-ILLINOIS Center for Cognitive Computing Systems Research](#) and [The Hong Kong University of Science and Technology](#).

## TEACHING EXPERIENCE

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■ Lecturer

**International AI Doctoral Academy (AIDA)**, Online

**Course:** An Introduction to Trustworthy Machine Learning, November 2022

**Website:** <https://www.i-aida.org/course/an-introduction-to-trustworthy-machine-learning/>

■ Lecturer

**Sharif University of Technology**, Tehran, Iran

**Course:** Fundamentals of Programming (Python), Fall 2017

**Website:** <http://ce.sharif.edu/courses/96-97/1/ce153-12/>

■ Teaching Assistant

**Swiss Federal Institute of Technology (EPFL)**, Lausanne, Switzerland

**Courses:** Computational Social Media (Spring 2021, 2022, and 2023)

■ Teaching Assistant

**Sharif University of Technology**, Tehran, Iran

**Courses:** Artificial Intelligence (Spring 2017), Advanced Topics in Artificial Intelligence - Statistical Learning Theory (Spring 2016), Engineering Probability and Statistics (Spring 2016)

■ Teaching Assistant

**University of Isfahan**, Esfahan, Iran

**Courses:** Artificial Intelligence (Fall 2013), Advanced Computer Programming 2 - JavaFx and Android (Fall 2012), Computer Programming - Java (Fall 2011), Computer Programming - C++ (Fall 2010)

## COMMUNITY AND PROFESSIONAL SERVICES

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- **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:** [AAAI PPAI](#) (2024), [ACM WiseML](#) (2023), [ICLR PAIR2Struct](#) (2022), [ICLR DPML](#) (2021)
- **Reviewer:** [IEEE TDSC](#) (2023), [LoG Conference](#) (2023, 2022), [AISTATS](#) (2023), [AIJ](#) (2022), [IEEE TBD](#) (2021), [ACM TIST](#) (2020), [SNAM](#) (2020), [WWW Journal](#) (2018)

## SKILLS AND EXPERTISE

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- **Programming and Scripting Languages:** Python, Java, C++, Shell Scripting, SQL, LaTeX
- **Machine Learning & Data Analysis:** PyTorch, PyTorch-Geometric, Tensorflow, Tensorflow-Lite, OpenMMLab, HuggingFace, Scikit-Learn, Pandas, Numpy
- **MLOps & Related Technologies:** Weights & Biases, PyTorch-Lightning, Dask, Git, GitHub, Linux, Docker
- **Privacy-Enhancing Technologies:** Flower, Opacus, Auto-DP

## PUBLICATIONS

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- Sina Sajadmanesh and Daniel Gatica-Perez  
[ProGAP: Progressive Graph Neural Networks with Differential Privacy Guarantees](#)  
*ACM International Conference on Web Search and Data Mining (WSDM)*, March 2024
- Sina Sajadmanesh  
[Privacy-Preserving Machine Learning on Graphs](#)  
*Ecole Polytechnique Fédérale de Lausanne (PhD Thesis)*, 2023
- Sina Sajadmanesh, Ali Shahin Shamsabadi, Aurélien Bellet, and Daniel Gatica-Perez  
[GAP: Differentially Private Graph Neural Networks with Aggregation Perturbation](#)  
*USENIX Security Symposium (USENIX Security)*, Aug 2023
- Sina Sajadmanesh and Daniel Gatica-Perez  
[Locally Private Graph Neural Networks](#)  
*ACM Conference on Computer and Communications Security (CCS)*, Nov 2021
- Sina Sajadmanesh and Daniel Gatica-Perez  
[When Differential Privacy Meets Graph Neural Networks](#)  
*Technical Report, ArXiv e-prints*, Jun 2020
- Seyed Ali Osia, Ali Shahin Shamsabadi, Sina Sajadmanesh, *et al.*  
[A Hybrid Deep Learning Architecture for Privacy-Preserving Mobile Analytics](#)  
*IEEE Internet of Things Journal (IoTJ)*, May 2020
- Sina Sajadmanesh, Sogol Bazargani, Jiawei Zhang, and Hamid R. Rabiee  
[Continuous-Time Relationship Prediction in Dynamic Heterogeneous Information Networks](#)  
*ACM Transactions on Knowledge Discovery from Data (TKDD)*, Aug 2019
- Sina Sajadmanesh, Jiawei Zhang, and Hamid R. Rabiee  
[NPGLM: A Non-Parametric Method for Temporal Link Prediction](#)  
*Technical Report, ArXiv e-prints*, Jun 2017
- Sina Sajadmanesh, Sina Jafarzadeh, Seyed Ali Ossia, *et al.*  
[Kissing Cuisines: Exploring Worldwide Culinary Habits on the Web](#)  
*International World Wide Web Conference Companion (WWW)*, Apr 2017
- Sina Sajadmanesh, Hamid R. Rabiee and Ali Khodadadi  
[Predicting Anchor Links between Heterogeneous Social Networks](#)  
*International Conference on Advances in Social Networks Analysis and Mining (ASONAM)*, Aug 2016