

CONTACT INFORMATION	Rue Marconi 19 1920 Martigny Switzerland	(+41) 27-721-77-58 ☎ sajadmanesh@idiap.ch ✉ <a href="https://sajadmanesh.com">https://sajadmanesh.com</a> 🏠
RESEARCH SUMMARY	My research interests lie at the intersection of privacy, deep learning, and graph analysis. More specifically, I use privacy enhancing technologies, such as differential privacy and federated learning, with graph representation learning algorithms, including graph neural networks, to make them more private, secure, and robust for real-world applications.	
EDUCATION	<p><b>École Polytechnique Fédérale de Lausanne (EPFL)</b>, Lausanne, Switzerland, May 2019 – May 2023</p> <p>Ph.D. in Electrical Engineering GPA: 5.75 / 6</p> <p><b>Thesis:</b> <i>Learning over Graphs: From Social to Privacy-Preserving Methods</i></p> <p><b>Adviser:</b> Prof. Daniel Gatica-Perez</p> <p><b>Relevant Courses:</b> Artificial Neural Networks (Deep Reinforcement Learning), Deep Learning for Natural Language Processing, Advanced Topics in Machine Learning</p> <p><b>Sharif University of Technology</b>, Tehran, Iran, Sep 2014 – Sep 2016</p> <p>M.Sc. in Information Technology Engineering GPA: 18.1 / 20</p> <p><b>Thesis:</b> <i>Link Prediction in Heterogeneous Multi-Layer Social Networks</i></p> <p><b>Adviser:</b> Prof. Hamid R. Rabiee</p> <p><b>Relevant Courses:</b> Machine Learning, Complex Dynamical Networks, Performance Modeling of Computer Systems, Advanced Network Security, Database Security and Privacy</p> <p><b>University of Isfahan</b>, Esfahan, Iran, Sep 2009 – Feb 2014</p> <p>B.Sc. in Computer Software Engineering GPA: 16.19 / 20 (Last four semesters: 17.4 / 20)</p> <p><b>Project:</b> <i>Design and Implementation of an Android App for Voice Control of Household Devices</i></p> <p><b>Adviser:</b> Prof. Ahamd R. Naghsh-Nilchi</p> <p><b>Relevant Courses:</b> Data Structures, Algorithms, Probability and Statistics, Artificial Intelligence, Information Retrieval, Software Engineering, Databases, Operating Systems, Computer Networks</p>	
RESEARCH EXPERIENCE	<p><b>Research Assistant</b>, May 2019 – present</p> <p><b>Social Computing Group, Idiap Research Institute</b>, Martigny, Switzerland</p> <ul style="list-style-type: none"> <li>Developing privacy-preserving graph neural network models using differential privacy to reduce the privacy risks of using graph representation learning algorithms in real applications.</li> </ul> <p><b>Research Assistant</b>, (Offered, but declined due to visa problems)</p> <p><b>IBM-ILLINOIS Center for Cognitive Computing Systems Research, University of Illinois at Urbana-Champaign</b>, Champaign, Illinois, United States</p> <p><b>Research Assistant</b>, Nov 2014 – May 2019</p> <p><b>Data Science and Machine Learning Lab, Sharif University of Technology</b>, Tehran, Iran</p> <ul style="list-style-type: none"> <li><b>Privacy-Preserving Deep Learning:</b> Worked on a hybrid approach based on Siamese fine-tuning and split learning to make non-private pre-trained deep learning models privacy-preserving at the inference stage.</li> <li><b>Web Data Science:</b> Analyzed a large-scale collection of recipes published on the web and their content, aiming to understand cuisines and culinary habits around the world.</li> <li><b>Social and Information Networks:</b> Developed time-aware link prediction algorithms over heterogeneous social networks using recurrent neural networks and non-parametric machine learning.</li> </ul>	
TEACHING EXPERIENCE	<p><b>Guest Lecturer</b>, Fall 2017</p> <p>Department of Computer Engineering, <b>Sharif University of Technology</b>, Tehran, Iran</p> <p><b>Course:</b> Fundamentals of Programming (Python)</p> <p><b>Website:</b> <a href="http://ce.sharif.edu/courses/96-97/1/ce153-12/">http://ce.sharif.edu/courses/96-97/1/ce153-12/</a></p> <p><b>Teaching Assistant</b></p> <p><b>EPFL</b></p> <ul style="list-style-type: none"> <li>Computational Social Media (Head TA), Spring 2021</li> </ul> <p><b>Sharif University of Technology</b></p> <ul style="list-style-type: none"> <li>Artificial Intelligence (Head TA), Spring 2017</li> <li>Advanced Topics in Artificial Intelligence - Statistical Learning Theory, Spring 2016</li> <li>Engineering Probability and Statistics, Spring 2016</li> </ul> <p><b>University of Isfahan</b></p> <ul style="list-style-type: none"> <li>Artificial Intelligence, Fall 2013</li> <li>Advanced Computer Programming 2 - JavaFx and Android, Fall 2012</li> </ul>	

- Computer Programming - Java, Fall 2011
- Computer Programming - C++, Fall 2010

INDUSTRIAL  
EXPERIENCE

**Big-Data Engineer**, Sep 2018 – May 2019

Sharif ICT Innovation Center, Tehran, Iran

- Responsible for building a native big-data processing platform using state of the art technologies, such as Spark, Cassandra, JanusGraph, Elasticsearch, etc.

**Software Engineering Intern**, Summer 2012

Amin Computer Co., Esfahan, Iran

- Responsible for designing and developing an Android application for company's web-based human resource management system.

## PUBLICATIONS

- [1] **Sina Sajadmanesh** and Daniel Gatica-Perez  
**Locally Private Graph Neural Networks**  
*ACM Conference on Computer and Communications Security (CCS 2021)*, Nov 2021
- [2] Seyed Ali Ossia, Ali Shahin Shamsabadi, **Sina Sajadmanesh**, *et al.*  
**A Hybrid Deep Learning Architecture for Privacy-Preserving Mobile Analytics**  
*IEEE Internet of Things Journal*, May 2020
- [3] **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*, Aug 2019
- [4] **Sina Sajadmanesh**, Jiawei Zhang, and Hamid R. Rabiee  
**NPGLM: A Non-Parametric Method for Temporal Link Prediction**  
*Technical Report, ArXiv e-prints*, Jun 2017
- [5] **Sina Sajadmanesh**, Sina Jafarzadeh, Seyed Ali Ossia, *et al.*  
**Kissing Cuisines: Exploring Worldwide Culinary Habits on the Web**  
*International World Wide Web Conference (WWW 2017) Companion*, Apr 2017
- [6] **Sina Sajadmanesh**, Hamid R. Rabiee and Ali Khodadadi  
**Predicting Anchor Links between Heterogeneous Social Networks**  
*IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining*, Aug 2016

MEDIA  
COVERAGE

- How Data Mining Reveals the World's Healthiest Cuisines, **MIT Technology Review**, 3 Nov 2016
- These are the world's most diverse cuisines, **The Independent**, 11 Nov 2016
- Un algorithme compare les cuisines du monde en matière d'ingrédients et d'apports nutritionnels, **France 24**, 15 Nov 2016
- If you are what you eat: regional cuisines have a major impact on health, **ReachMD**, 4 Nov 2016
- Les cuisines du monde passées au crible des big data, **Sciences et Avenir**, 14 Nov 2016

INVITED  
TALKS

**Locally Private Graph Neural Networks**, Jan 2021

Twitter Machine Learning Seminar

**Privacy-Preserving Deep Learning Over Graphs**, Dec 2020

Information Processing and Communications Lab, **Imperial College London**, UK

PROFESSIONAL  
SERVICES

- Reviewer: **Distributed and Private Machine Learning Workshop** (2021)
- Reviewer: **ACM Transactions on Intelligent Systems and Technology** (2020)
- Reviewer: **Social Network Analysis and Mining Journal** (2020)
- Reviewer: **World Wide Web Journal** (2018)

HONORS  
AND AWARDS

- **PhD admission**, Computer Science, University of Illinois at Urbana-Champaign, 2018 (declined)
- **PhD admission** Computer Science, Hong-Kong University of Science and Technology, 2017 (declined)
- **Ranked 3rd** in cumulative GPA among B.Sc. Computer Software Engineering students admitted for Fall 2009, University of Isfahan, 2014
- **Ranked 6th** in Iranian nationwide university entrance exam for graduate studies, field of Artificial Intelligence, among more than 100000 students, 2014
- **Ranked 15th** in Iranian nationwide university entrance exam for graduate studies, field of Computer Networks and Security, among more than 30000 students, 2014

- **Ranked 28th** in 18th National Computer Olympiad for University Students at Tarbiat Modares University , Tehran, Iran, 2013
- **Ranked 16th** in ACM-ICPC regional contest, Asia region, Tehran site, among more than 70 teams at University of Tehran , Tehran, Iran, 2011
- **Ranked 2nd** in nationwide collegiate programming contest among more than 70 teams at University of Kashan , Kashan, Iran, 2010
- **Ranked among top 0.02%** in Iran's nationwide university entrance exam for undergraduate studies., 2009

MEMBERSHIPS    ACM Professional Member, 2020 – Present  
ACM Student Member, 2011 – 2014  
ACM-ICPC Student Chapter, [University of Isfahan](#), Esfahan, Iran, 2010 – 2012

TECHNICAL SKILLS    *Programming:*  
Python, Java, C, C++, MATLAB, PHP, Javascript  
  
*Information Retrieval & Analytics:*  
Elasticsearch, JanusGraph, Cassandra  
  
*Data Science and Machine Learning:*  
PyTorch, PyTorch-Geometric, PyTorch-Lightning, Scikit-Learn, Pandas

REFERENCES    **Prof. Daniel Gatica-Perez**, Idiap Research Institute, EPFL  
Website: <https://idiap.ch/~gatica>                      Email: [daniel.gatica-perez@epfl.ch](mailto:daniel.gatica-perez@epfl.ch)  
  
**Prof. Hamid R. Rabiee**, Department of Computer Engineering, Sharif University of Technology  
Website: <http://sharif.ir/~rabiee>                      Email: [rabiee@sharif.edu](mailto:rabiee@sharif.edu)  
  
**Prof. Hamed Haddadi**, Dyson School of Design Engineering, Imperial College London  
Website: <https://haddadi.github.io/>                      Email: [h.haddadi@imperial.ac.uk](mailto:h.haddadi@imperial.ac.uk)  
  
**Prof. Emiliano De Cristofaro**, Department of Computer Science, University College London  
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