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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	<b>École Polytechnique Fédérale de Lausanne (EPFL)</b> , Lausanne, Switzerland, May 2019 – May 2023	
	Ph.D. in Electrical Engineering GPA: 5.7 / 6 <b>Thesis:</b> <i>Learning over Graphs: A Privacy-Preserving Approach</i> <b>Adviser:</b> Prof. Daniel Gatica-Perez <b>Relevant Courses:</b> Artificial Neural Networks (Deep Reinforcement Learning), Deep Learning for Natural Language Processing, Advanced Topics in Machine Learning	
	<b>Sharif University of Technology</b> , Tehran, Iran, Sep 2014 – Sep 2016	
	M.Sc. in Information Technology Engineering GPA: 18.1 / 20 <b>Thesis:</b> <i>Link Prediction in Heterogeneous Multi-Layer Social Networks</i> <b>Adviser:</b> Prof. Hamid R. Rabiee <b>Relevant Courses:</b> Machine Learning, Complex Dynamical Networks, Performance Modeling of Computer Systems, Advanced Network Security, Database Security and Privacy	
	<b>University of Isfahan</b> , Esfahan, Iran, Sep 2009 – Feb 2014	
	B.Sc. in Computer Software Engineering GPA: 16.19 / 20 (Last four semesters: 17.4 / 20) <b>Project:</b> <i>Design and Implementation of an Android App for Voice Control of Household Devices</i> <b>Adviser:</b> Prof. Ahamd R. Naghsh-Nilchi <b>Relevant Courses:</b> Data Structures, Algorithms, Probability and Statistics, Artificial Intelligence, Information Retrieval, Software Engineering, Databases, Operating Systems, Computer Networks	
RESEARCH EXPERIENCE	<b>Research Assistant</b> , May 2019 – present <b>Social Computing Group, Idiap Research Institute</b> , Martigny, Switzerland	
	<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>	
	<b>Research Assistant</b> , Nov 2014 – May 2019	
	<b>Data Science and Machine Learning Lab, Sharif University of Technology</b> , Tehran, Iran <ul style="list-style-type: none"> <li><b>Privacy-Preserving Deep Learning:</b> 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.</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	<b>Guest Lecturer</b> , Fall 2017	
	Department of Computer Engineering, <b>Sharif University of Technology</b> , Tehran, Iran <b>Course:</b> Fundamentals of Programming (Python) <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>	
	<b>Teaching Assistant</b>	
	<b>EPFL</b> <ul style="list-style-type: none"> <li>Computational Social Media (Head TA), Spring 2021</li> </ul>	
	<b>Sharif University of Technology</b>	
	<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>	
	<b>University of Isfahan</b>	
	<ul style="list-style-type: none"> <li>Artificial Intelligence, Fall 2013</li> <li>Advanced Computer Programming 2 - JavaFx and Android, Fall 2012</li> <li>Computer Programming - Java, Fall 2011</li> <li>Computer Programming - C++, Fall 2010</li> </ul>	

INDUSTRIAL EXPERIENCE	<b>Big-Data Engineer</b> , Sep 2018 – May 2019 Sharif ICT Innovation Center, Tehran, Iran <ul style="list-style-type: none"> <li>Responsible for building a native big-data processing platform using state-of-the-art technologies, such as Spark, Cassandra, JanusGraph, Elasticsearch, etc.</li> </ul>
	<b>Software Engineering Intern</b> , Summer 2012 Amin Computer Co., Esfahan, Iran <ul style="list-style-type: none"> <li>Responsible for designing and developing an Android application for company's web-based human resource management system.</li> </ul>
PUBLICATIONS	<p>[1] <b>Sina Sajadmanesh</b> and Daniel Gatica-Perez  <b>Locally Private Graph Neural Networks</b>  <i>ACM Conference on Computer and Communications Security (CCS 2021)</i>, Nov 2021</p> <p>[2] Seyed Ali Ossia, Ali Shahin Shamsabadi, <b>Sina Sajadmanesh</b>, <i>et al.</i>  <b>A Hybrid Deep Learning Architecture for Privacy-Preserving Mobile Analytics</b>  <i>IEEE Internet of Things Journal</i>, May 2020</p> <p>[3] <b>Sina Sajadmanesh</b>, Sogol Bazargani, Jiawei Zhang, and Hamid R. Rabiee  <b>Continuous-Time Relationship Prediction in Dynamic Heterogeneous Information Networks</b>  <i>ACM Transactions on Knowledge Discovery from Data</i>, Aug 2019</p> <p>[4] <b>Sina Sajadmanesh</b>, Jiawei Zhang, and Hamid R. Rabiee  <b>NPGLM: A Non-Parametric Method for Temporal Link Prediction</b>  <i>Technical Report, ArXiv e-prints</i>, Jun 2017</p> <p>[5] <b>Sina Sajadmanesh</b>, Sina Jafarzadeh, Seyed Ali Ossia, <i>et al.</i>  <b>Kissing Cuisines: Exploring Worldwide Culinary Habits on the Web</b>  International World Wide Web Conference (WWW 2017) Companion, Apr 2017</p> <p>[6] <b>Sina Sajadmanesh</b>, Hamid R. Rabiee and Ali Khodadadi  <b>Predicting Anchor Links between Heterogeneous Social Networks</b>  <i>IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining</i>, Aug 2016</p>
MEDIA COVERAGE	<ul style="list-style-type: none"> <li><b>MIT Technology Review</b>, How Data Mining Reveals the World's Healthiest Cuisines, 3 Nov 2016</li> <li><b>The Independent</b>, These are the world's most diverse cuisines, 11 Nov 2016</li> <li><b>France 24</b>, Un algorithme compare les cuisines du monde en matière d'ingrédients et d'apports nutritionnels, 15 Nov 2016</li> <li><b>Sciences et Avenir</b>, Les cuisines du monde passées au crible des big data, 14 Nov 2016</li> </ul>
TALKS AND PRESENTATIONS	<b>Locally Private Graph Neural Networks</b> Graph Neural Networks User Group Meetup, Remote, Jul 2021 AI4Media Workshop on Explainability, Robustness and Privacy in AI, Remote, Jun 2021 Twitter Machine Learning Seminar, Remote, Jan 2021  <b>Privacy-Preserving Deep Learning Over Graphs</b> Information Processing and Communications Lab, <b>Imperial College London</b> , Remote, Dec 2020
PROFESSIONAL SERVICES	<ul style="list-style-type: none"> <li>Reviewer: <b>Artificial Intelligence Journal</b> (2022)</li> <li>Reviewer: <b>IEEE Transactions on Big Data</b> (2021)</li> <li>Reviewer: <b>Distributed and Private Machine Learning Workshop</b> (2021)</li> <li>Reviewer: <b>ACM Transactions on Intelligent Systems and Technology</b> (2020)</li> <li>Reviewer: <b>Social Network Analysis and Mining Journal</b> (2020)</li> <li>Reviewer: <b>World Wide Web Journal</b> (2018)</li> </ul>
HONORS AND AWARDS	<ul style="list-style-type: none"> <li><b>Finalist</b>, in CSAW Applied Research Competition for the best paper award in computer security, 2021</li> <li><b>PhD admission</b>, Computer Science, University of Illinois at Urbana-Champaign, 2018 (declined)</li> <li><b>PhD admission</b> Computer Science, Hong-Kong University of Science and Technology, 2017 (declined)</li> <li><b>Ranked 3rd</b> in cumulative GPA among B.Sc. Computer Software Engineering students admitted for Fall 2009, University of Isfahan, 2014</li> <li><b>Ranked 6th</b> in Iranian nationwide university entrance exam for graduate studies, field of Artificial Intelligence, among more than 100000 students, 2014</li> </ul>

- **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 – 2021  
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, Deep Graph Library, 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  
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