

Payam Siyari

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Google Headquarters
1600 Amphitheatre Parkway
Mountain View, CA 94043
USA



EDUCATION



PhD, Computer Science (*Minor in Statistics*)

Aug 2014 - Dec 2018

College of Computing, Georgia Institute of Technology

Atlanta, GA, USA

Thesis: [Optimization-Driven Emergence of Deep Hierarchies with Applications in Data Mining & Evolution](#)

MSc, Computer Science - Machine Learning (GPA: 4.0/4.0)

Aug 2014 - Aug 2016

College of Computing, Georgia Institute of Technology

Atlanta, GA, USA



MSc, Computer Engineering - Software Eng. (GPA: 19.24/20.00)

Aug 2011 - Aug 2013

Dpt. of Computer Engineering, Sharif University of Technology

Tehran, Iran

Thesis: [Network Topology Inference from Incomplete Data](#)



BSc, Computer Science (GPA: 18.46/20.00)

Sep 2007 - Aug 2011

Dpt. of Mathematical Sciences, Shahid Beheshti University

Tehran, Iran

PROFESSIONAL EXPERIENCE



Software Engineer

Google (Mountain View, CA), Mar 2022 - Present



Senior Data Scientist

Aurora (San Francisco, CA), Jan 2021 - Mar 2022

- (Aurora Innovation, Inc. acquired Uber ATG.)
- **Analytics of autonomous trucking operations & triage:**
 - Data-driven study pipeline for construction scenario mining.
- **Autonomous trucking product strategy modeling & optimization:**
 - Geo-spatial analysis for economics of resource placement and assignment.
 - Weather data warehouse design and management for engineering & business planning.



Senior Data Scientist

Uber (San Francisco, CA), Jan 2020 - Jan 2021

Data Scientist II

Oct 2018 - Dec 2019

- **Advanced Technologies Group (ATG).**
- **Worked on data-driven outlook for expansion of self-driving rideshare service:**
 - Statistical analysis for strategic decisions, e.g. min. test miles before deployment.
 - Deep learning for geo-spatial representations of satellite images & road networks.
- **Developed tooling for analysis of occurrence of offline tests in on-road driving logs:**
 - Algorithm development for geo-spatial modeling & indexing using Uber UMM & H3.
 - Data engineering for large-scale pipeline development (Hive, Spark).
- **@UberEngineering Showcase:**
 - [Power On: Accelerating Uber's Self-Driving Vehicle Development with Data](#)
 - [Searchable Ground Truth: Querying Uncommon Scenarios in Self-Driving Development](#)

Software Engineering Intern

Uber (Pittsburgh, PA), Aug 2017 - Dec 2017

- **Self-Driving Technology Engineer (Road Analytics).**
- Scalable automated scenario identification in autonomous driving logs.



Research Assistant

Georgia Tech (Atlanta, GA), Aug 2014 - Dec 2018

- **Research on analysis and modeling of optimization-driven hierarchical structures.**
- Applications in sequential pattern mining, feature extraction, compression & evolution.



Research Intern

Xerox XRCE (Grenoble, France), Aug 2015 - Dec 2015

- **Research on MDL-Based grammatical inference from sequential data.**
- Applications in compression & unsupervised parsing of natural language.



Research Assistant

Sharif University (Tehran, Iran), Aug 2011 - Aug 2013

- **Research on network inference via matrix factorization & compressed sensing.**
- **Research on epidemic models over multilayer networks.**



iOS Developer

Pichak co. (Tehran, Iran), Apr 2011 - Aug 2011

- **VPN in Touch: A VPN account management app (client side).**

AREAS OF INTEREST

Data Science & Machine Learning
Maps & Geo-spatial Data Science
Graphs & Networks Mining
Natural Language Processing
Ads & Recommender Systems

SKILLS

Python, Java, C++
PyTorch, Tensorflow,
NLTK, NetworkX, SNAP
Hive, Spark
SQLite, PostgreSQL, MySQL
MATLAB, OpenMPI, R
Django, DASH, Bokeh, D3

SELECTED PAPERS

- **P. Siyari**, et al., "Evolution of Hierarchical Structure and Reuse in iGEM Synthetic DNA Sequences", International Conference on Computational Science (ICCS), 2019.

- **P. Siyari**, et al., "Emergence and Evolution of Hierarchical Structure in Complex Systems", Springer Proc. in Complexity: Dynamics On and Of Complex Networks III, 2018.

- **P. Siyari**, et al., "The Generalized Smallest Grammar Problem", International Conference on Grammatical Inference (ICGI), 2017.

- **P. Siyari**, et al., "Lexis: An Optimization Framework for Discovering the Hierarchical Structure of Sequential Data", In Proc. of ACM SIGKDD, 2016.

Last Updated: March 2022