

# Payam Siyari

## Software Engineer, Google LLC

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### Work Mailing Address:

Google Headquarters  
1600 Amphitheatre Parkway  
Mountain View, CA 94043  
USA



## AREAS OF INTEREST

Graphs & Networks Mining  
Natural Language Processing  
Maps & Geo-spatial Data Science  
Ads & Recommender Systems  
Unsupervised Learning & Weak-Supervision  
Transfer Learning & Distillation

## 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 Conf. 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.

Google Scholar

<https://goo.gl/4dwgxx>

Last Updated: Oct 2025

## 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 w. 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



**Senior Software Engineer** Google (Mountain View, CA), Mar 2022 - Present

- **Payments risk decision quality:**
  - Redesign and implementation of payments platform loss analytics via weak-supervision.
  - Lead a small team for expanding it to tabular data foundation modeling.
- Merchant collusion fraud decision quality owner, using bipartite clustering.
- Main engineer for hijacked account-fraud detection.
- Analytical tooling for external signal evaluation.



**Senior Data Scientist** Aurora (San Francisco, CA), Jan 2021 - Mar 2022

- **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

- **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 back-end pipeline (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).**