Payam Siyari

Senior Software Engineer, Google LLC

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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
(Uber ATG Acquisition)
- **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
(Uber 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 back-end pipeline (Hive, Spark).
- **@UberEnginnering 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

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/4dwxgx

Last Updated: Oct 2025