

Payam Siyari

Sr. Data Scientist, Uber Advanced Technologies Group

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Citizenship:

Iranian (U.S. Permanent Resident)



EDUCATION

- **PhD, Computer Science (Minor in Statistics)** **2014 - 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)** **2014 - 2016**
College of Computing, Georgia Institute of Technology Atlanta, GA, USA
Coursework: Machine Learning, Deep Learning for Perception, Natural Language Processing, Data and Visual Analytics, High Performance Computing, Time Series Analysis, Regression.
- **MSc, Computer Engineering - Software Eng. (GPA: 19.24/20.00)** **2011 - 2013**
Dpt. of Computer Engineering, Sharif University of Technology Tehran, Iran
Thesis: [Network Topology Inference from Incomplete Data](#)
Coursework: Statistical Pattern Recognition, Data Mining, Convex Optimization, Game Theory.
- **BSc, Computer Science (GPA: 18.46/20.00)** **2007 - 2011**
Dpt. of Mathematical Sciences, Shahid Beheshti University Tehran, Iran

PROFESSIONAL EXPERIENCE

- **Senior Data Scientist** **Uber ATG (San Francisco, CA), 2020 - Present**
- **Data Scientist II** **2018 - 2019**
 - *Full-Stack Data Scientist*
 - *Deep Learning: GeoSpatial representation learning, involving CNNs on satellite image data, RNNs on temporal trip data and GNNs on road networks.*
 - *Data Structures and Algorithms: GeoSpatial joins and indexing, including Uber UMM, Uber H3, S2 Geometry.*
 - *Data Engineering: Advanced SQL, Relational schema design, BigData pipeline development (Hive, Spark).*
 - *Statistical Analysis: A/B testing, Utilizing statistical testing for strategic decision making e.g. minimum amount of miles needed for deploying service.*
 - *Data Visualization, Analytics and Dashboarding: DASH, Bokeh.*
 - *@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 ATG (Pittsburgh, PA), Fall 2017**
 - *Self-Driving Technology Engineer (Road Analytics)*
- **Research Assistant** **Georgia Tech (Atlanta, GA), 2014 - 2018**
 - *Research on Analysis and Modeling of Hierarchical Structures within Big Data*
 - *Applications in Sequential Pattern Mining, Feature Extraction & Compression*
- **Research Intern** **Xerox XRCE (Grenoble, France), Fall 2015**
 - *Research on MDL-Based Grammatical Inference from Sequential Data*
 - *Applications in Compression & Unsupervised Parsing of Natural Language*
- **Research Assistant** **Sharif University (Tehran, Iran), 2011-2013**
 - *Research on Network Inference via NMF and Compressed Sensing*
 - *Research on Epidemic Models over Multilayer Networks*
- **iOS Developer** **Pichak co. (Tehran, Iran), 2011**
 - *VPN in Touch: A VPN account management app (client side).*

SELECTED PUBLICATIONS

- **P. Siyari**, B. Dilkina, C. Dovrolis, "Evolution of Hierarchical Structure and Reuse in iGEM Synthetic DNA Sequences", International Conference on Computational Science (ICCS), 2019.
- **P. Siyari**, B. Dilkina, C. Dovrolis, "Emergence and Evolution of Hierarchical Structure in Complex Systems", Springer Proceedings in Complexity: **Dynamics On and Of Complex Networks III** - Machine Learning and Statistical Physics Approaches, 2018.
- **P. Siyari**, M. Galle', "The Generalized Smallest Grammar Problem", In Proceedings of International Conference on Grammatical Inference (ICGI), 2017.
- **P. Siyari**, B. Dilkina, C. Dovrolis, "Lexis: An Optimization Framework for Discovering the Hierarchical Structure of Sequential Data", In Proceedings of **ACM SIGKDD**, 2016 (Oral Presentation - Acceptance Rate: 8.9%).

AREAS OF INTEREST

Data Science & Machine Learning
Maps and Geospatial Data Science
Natural Language Processing
Graph & Sequence Mining
Recommender Systems

SKILLS

Python, Java, C++, Swift

PyTorch, Tensorflow, Keras,
NLTK, NetworkX, SNAP

Hive, Spark, Pig

SQLite, PostgreSQL, MySQL

MATLAB, OpenMPI, R

React JS, Django, DASH,
Bokeh, D3