

Payam Siyari

Sr. Data Scientist - Aurora Innovation, Inc.

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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** **Aurora (San Francisco, CA), 2021 - Present**
- (Aurora Innovation, Inc. acquired Uber ATG)
-  **Senior Data Scientist** **Uber (San Francisco, CA), 2020 - 2021**
Data Scientist II **2018 - 2019**
- *Advanced Technologies Group (ATG) - Full-Stack Data Scientist*
- *[Data Structures and Algorithms](#): GeoSpatial joins and indexing on Uber UMM.*
- *[Data Engineering](#): Advanced SQL, Data pipeline development (Hive, Spark).*
- *[Statistical Analysis](#): Strategic decision making e.g. minimum miles for deploying service.*
- *[Deep Learning](#): GeoSpatial representation learning on satellite & road networks.*
- *[Data Visualization, Analytics and Dashboarding](#): DASH, Bokeh.*
- *@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 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 & Evolution*
-  **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 Proc. in Complexity: **Dynamics On and Of Complex Networks III**, 2018.
- **P. Siyari**, M. Galle', "The Generalized Smallest Grammar Problem", In Proc. 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 Proc. of ACM SIGKDD, 2016.
- M. Salehi, R. Sharma, M. Marzolla, M. Magnani, **P. Siyari**, D. Montesi, "Spreading Processes in Multilayer Networks", In **IEEE Trans. Network Science and Engineering**, 2015.

AREAS OF INTEREST

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

SKILLS

Python, Java, C++

PyTorch, Tensorflow,
NLTK, NetworkX, SNAP

Hive, Spark

SQLite, PostgreSQL, MySQL

MATLAB, OpenMPI, R

Django, DASH,
Bokeh, D3