

# Payam Siyari

## Data Scientist II, Uber Advanced Technologies Group

### Mailing Address:

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### Citizenship:

Iranian (U.S. Permanent Resident)

## AREAS OF INTEREST

Data Science & Machine Learning

Natural Language Processing

Graph & Sequence Mining

Recommender Systems

## SOFTWARE PROJECTS

### Lexis

- Sequential pattern mining
- Network analysis
- Feature extraction

### GSGP

- Unsupervised parsing in NLP
- Compression

### Evo-Lexis

- Complex Network Analysis

### Sign Language Recognition

- Deep Learning (3D CNN)
- Spatio-Temporal Feature Learning

### MLNetwork

- Mining of multilayer networks

### SLPMF

- Recommender Systems (NMF)
- Link Prediction in Networks

### VPN in Touch

- VPN Management Client (iOS)

## SKILLS & EXPERIENCES

Python, Java, C++, Swift

MATLAB, OpenMPI, R

Theano, PyTorch, Caffe, Tensorflow

Keras, Scikit-Learn, Pandas, NLTK

Hadoop, Pig, Spark

SQLite, PostgreSQL, MySQL

DASH, Django, D3

**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 with applications in data mining and 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: 19.24/20.0) 2011 - 2013**

Department of Computer Eng., 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: 18.46/20.0) 2007 - 2011**

Department of Math Sciences, Shahid Beheshti University Tehran, Iran

## PROFESSIONAL EXPERIENCE

**Data Scientist II Uber ATG (San Francisco, CA), 2018 - Present**

- Data Science Team - @UberEngineering Showcase:
- [Power On: Accelerating Uber's Self-Driving Vehicle Development with Data](#)

**Software Engineering Intern Uber ATG (Pittsburgh, PA), Fall 2017**

- Self-Driving Technology Engineer (Road Analytics)

**Research Assistant GeorgiaTech (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**, 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%).
- **P. Siyari**, M. Galle', "The Generalized Smallest Grammar Problem", In Proceedings of International Conference on Grammatical Inference (**ICGI**), 2016.
- M. Salehi, **P. Siyari**, M. Magnani, D. Montesi, "Multidimensional Epidemic Thresholds in Diffusion Processes over Interdependent Networks", In **Chaos, Solitons & Fractals**, 2015.
- M. Salehi, R. Sharma, M. Marzolla, M. Magnani, **P. Siyari**, D. Montesi, "Spreading Processes in Multilayer Networks", In **IEEE Transactions on Network Science and Engineering**, 2015.
- A. Fattaholmanan, H. R. Rabiee, **P. Siyari**, A. Khodadadi, and A. Soltani-Farani, "A Peer to Peer Compressive Sensing Framework for Network Monitoring", In **IEEE Communications Letters**, 2015.
- **P. Siyari**, H. R. Rabiee, M. Salehi, and M. Eslami, "Network Reconstruction under Compressive Sensing", In Proc. **ASE/IEEE International Conference on Social Informatics**, Dec. 2012.