

# Payam Siyari

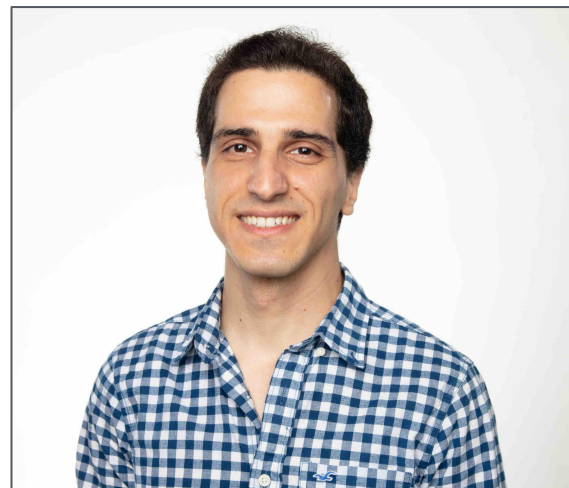
## Sr. Data Scientist, Uber Advanced Technologies Group

### Mailing Address:

Uber Advanced Technologies Group  
579 20th Street  
San Francisco, CA 94107  
USA

### Citizenship:

Iranian (U.S. Permanent Resident)



### 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

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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**  
Dep. 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**  
Dep. 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.
  - @UberEngineering Showcase:
    - [Power On: Accelerating Uber's Self-Driving Vehicle Development with Data](#)
    - [Searchable Ground Truth: Querying Uncommon Scenarios in Self-Driving Car Development](#)
- **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.