Payam Siyari

Sr. Data Scientist, Uber Advanced Technologies Group

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AREAS OF INTEREST

Data Science & Machine Learning

Maps & Geospatial Data Science

Natural Language Processing

Graph & Sequence Mining

Ads & 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

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 & 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 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%).

Last Updated: *November 2020*