Payam Siyari

Sr. Data Scientist - Aurora Innovation, Inc.

Mailing Address:

   Aurora Innovation, Inc.

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https://goo.gl/4dwxgx — Google Scholar

EDUCATION

PhD, Computer Science (*Minor in Statistics*) — Aug 2014 - Dec 2018
College of Computing, Georgia Institute of Technology — Atlanta, GA, USA
Thesis: *Optimization-Driven Emergence of Deep Hierarchies with Applications in Data Mining & Evolution*

MSc, Computer Science - Machine Learning (GPA: 4.0/4.0) — Aug 2014 - Aug 2016
College of Computing, Georgia Institute of Technology — Atlanta, GA, USA

MSc, Computer Engineering - Software Eng. (GPA: 19.24/20.00) Aug 2011 - Aug 2013
Dpt. of Computer Engineering, Sharif University of Technology — Tehran, Iran
Thesis: *Network Topology Inference from Incomplete Data*

BSc, Computer Science (GPA: 18.46/20.00) — Sep 2007 - Aug 2011
Dpt. of Mathematical Sciences, Shahid Beheshti University — Tehran, Iran

PROFESSIONAL EXPERIENCE

Senior Data Scientist   **Aurora (San Francisco, CA),** Jan 2021 - Present
- *(Aurora Innovation, Inc. acquired Uber ATG)*
- *Analytics of autonomous trucking operations and triage:*
  - *Data-driven study pipeline for construction scenario mining.*
- *Autonomous trucking product strategy modeling & optimization:*
  - *Geo-spatial analysis for economics of resource placement and assignment.*
  - *Weather data warehouse design and management for engineering & business planning.*

Senior Data Scientist   **Uber (San Francisco, CA),** Jan 2020 - Jan 2021
Data Scientist II   Oct 2018 - Dec 2019
- *Advanced Technologies Group (ATG), i.e. Self-Driving - Full Stack Data Scientist.*
- *Worked on data-driven outlook for expansion of self-driving rideshare service.*
  - *Statistical analysis for strategic decisions, e.g. min. test miles before deployment.*
  - *Deep learning for geo-spatial representations of satellite images & road networks.*
- *Developed tooling for analysis of occurrence of offline tests in on-road driving logs.*
  - *Algorithm Development for geo-spatial modeling & indexing, e.g. Uber UMM, H3.*
  - *Data Engineering for large-scale pipeline development (Hive, Spark).*
- *@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 (Pittsburgh, PA),** Aug 2017 - Dec 2017
- *Self-Driving Technology Engineer (Road Analytics).*
  - *Project on scalable automated scenario identification in autonomous driving logs.*

Research Assistant   **Georgia Tech (Atlanta, GA),** Aug 2014 - Dec 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),** Aug 2015 - Dec 2015
- *Research on MDL-Based Grammatical Inference from Sequential Data.*
  - *Applications in Compression & Unsupervised Parsing of Natural Language.*

Research Assistant   **Sharif University (Tehran, Iran),** Aug 2011 - Aug 2013
- *Research on Network Inference via NMF and Compressed Sensing.*
- *Research on Epidemic Models over Multilayer Networks.*

iOS Developer   **Pichak co. (Tehran, Iran),** Apr 2011 - Aug 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. Galle᷄, "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.

AREAS OF INTEREST

Data Science & Machine Learning

Maps & Geo-spatial Data Science

Graphs & Networks Mining

Natural Language Processing

Ads & Recommender Systems

SKILLS

Python, Java, C++

PyTorch, Tensorflow,
NLTK, NetworkX, SNAP

Hive, Spark

SQLite, PostgreSQL, MySQL

MATLAB, OpenMPI, R

Django, DASH,
Bokeh, D3

Last Updated: November 2021