

# Hossein Hamooni

DATA SCIENTIST

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## Education

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### University of New Mexico

*Albuquerque, NM, USA*

PH.D. IN COMPUTER SCIENCE (WITH DISTINCTION)

*August 2013 - May 2017*

- Advisor: Dr. Abdullah Mueen
- Research interests: Distributed computing, Time series mining and Mining social media
- Dissertation Title: Distributed knowledge discovery for diverse data
- GPA: 4.07 / 4

### Tehran Polytechnic (Amirkabir University of Technology)

*Tehran, Iran*

M.S. IN COMPUTER NETWORKS

*August 2010 - February 2013*

- Thesis Title: Designing a black-hole detection system for wireless networks
- GPA: 17.50 / 20

### Tehran Polytechnic (Amirkabir University of Technology)

*Tehran, Iran*

B.S. IN COMPUTER ENGINEERING

*August 2006 - May 2010*

- Ranked second best student in computer engineering
- GPA: 17.42 / 20

## Experience

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### Visa Research

*Palo Alto, CA, USA*

RESEARCH SCIENTIST

*June 2017 - Present*

- Working as a researcher in Data Analytics Team

### University of New Mexico

*Albuquerque, NM, USA*

RESEARCH ASSISTANT

*August 2013 - May 2017*

- Working on several data mining projects
- All projects involve distributed computing, time series mining, and big data
- In collaboration with Dr. Abdullah Mueen

### Visa Research

*Foster City, CA, USA*

RESEARCH INTERN

*May 2016 - August 2016*

- Designed a recommender system based on machine learning techniques
- We used TensorFlow to train a neural network on a huge dataset
- Designed a method to evaluate the performance of the embeddings
- In collaboration with Dr. Hao Yang

### NEC Laboratories America Inc.

*Princeton, NJ, USA*

RESEARCH INTERN

*May 2015 - August 2015*

- Designed an algorithm for heterogeneous log analysis and implemented it in Spark (a map-reduce framework)
- The designed algorithm can process hundreds of millions of computer logs in less than an hour
- The designed system generates accurate log patterns from the input logs
- In collaboration with Dr. Biplob Debnath, Dr. Hui Zhang and Dr. Xianwu Xu

### Farazpardazan Co.

*Tehran, Iran*

SENIOR SOFTWARE ENGINEER

*November 2010 - July 2013*

- Leader of a software development team
- Developed a core banking system based on message passing protocol in Java.

# Publication

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## Mining Sparse Time Series under Dynamic Time Warping

KNOWLEDGE AND INFORMATION SYSTEMS JOURNAL

March 2017

- Abdullah Mueen, Nikan Chavoshi, Noor Abuelrub, **Hossein Hamooni**, Amanda Minnich, Jonathan MacCarthy

## On-Demand Bot Detection and Archival System

WWW 2017

*Perth, Australia*

*April 2017*

- Nikan Chavoshi, **Hossein Hamooni**, Abdullah Mueen

## Temporal Patterns in Bot Activities

WWW 2017, TEMPWEB WORKSHOP

*Perth, Australia*

*April 2017*

- Nikan Chavoshi, **Hossein Hamooni**, Abdullah Mueen

## DeBot: Twitter Bot Detection via Warped Correlation

ICDM 2016

*Barcelona, Spain*

*December 2016*

- Nikan Chavoshi, **Hossein Hamooni**, Abdullah Mueen

## Fast Warping Distance for Sparse Time Series

ICDM 2016

*Barcelona, Spain*

*December 2016*

- Abdullah Mueen, Nikan Chavoshi, Noor Abuelrub, **Hossein Hamooni**, Amanda Minnich

## On URL Changes and Handovers in Social Media

SOCINFO 2016

*Seattle, WA, USA*

*November 2016*

- **Hossein Hamooni**, Nikan Chavoshi, Abdullah Mueen

## Identifying Correlated Bots in Twitter

SOCINFO 2016

*Seattle, WA, USA*

*November 2016*

- Nikan Chavoshi, **Hossein Hamooni**, Abdullah Mueen

## LogMine: Fast Pattern Recognition for Log Analytics

CIKM 2016

*Indianapolis, IN, USA*

*October 2016*

- **Hossein Hamooni**, Biplob Debnath, Jianwu Xu, Hui Zhang, Geoff Jiang, Abdullah Mueen

## Phoneme Sequence Recognition via DTW-based Classification

KNOWLEDGE AND INFORMATION SYSTEMS JOURNAL

*October 2015*

- **Hossein Hamooni**, Abdullah Mueen, Amy Neel

## Dual-domain Hierarchical Classification of Phonetic Time Series

ICDM 2014

*Shenzhen, China*

*December 2014*

- **Hossein Hamooni**, Abdullah Mueen

## Time Series Join on Subsequence Correlation

ICDM 2014

*Shenzhen, China*

*December 2014*

- Abdullah Mueen, **Hossein Hamooni**, Trilce Estrada

## Patent

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### DisPatch: Distributed Pattern Matching over Streaming Time Series

HOSSEIN HAMOONI, ABDULLAH MUEEN

### Fast Pattern Discovery for Log Analytics

HOSSEIN HAMOONI, BIPOB DEBNATH, JIANWU XU, HUI ZHANG, GUOFEI JIANG

## Honors & Awards

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2017	Ph.D. with distinction	Albuquerque, NM
2017	Best author showcase award at NMSC 2017	Albuquerque, NM
2016	CIKM 2016 student travel award	Indianapolis, IN
2015	Best poster presentation at UNM's Data 2 Knowledge Day	Albuquerque, NM
2015	Best mentor award at UNM's Lobo Friend Program	Albuquerque, NM
2014	ICDM 2014 student travel award	Shenzhen, China
2014	Second place in the poster competition in CS/ECE Tech Day 2014	Albuquerque, NM
2010	International Collegiate Programming Contest (ICPC) World finals, as a coach assistant	Harbin, China
2010	10th Place in ACM/ICPC West Asian Regional Contest, as a coach	Tehran, Iran
2006	Ranked 540 in National Universities Entrance Exam among more than 700,000 applicants	Tehran, Iran

## Professional and Service Activities

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2017	Reviewer for KDD'17 (Knowledge Discovery and Data Mining Conference)	U.S.
2017	Reviewer for SDM'16 (SIAM International Conference on Data Mining)	U.S.
2016	Reviewer for ICDM'16 (International Conference on Data Mining)	U.S.
2016	Reviewer for KNOSYS (Journal of Knowledge-Based Systems)	U.S.
2016	President of Iranian Students Association at UNM	U.S.
2015	Mentor for new international students at UNM (Lobo Friend Program)	U.S.
2009	Chair of the student committee in 14th international conference of computer association of Iran	Tehran, Iran
2008	Head of the student scientific association in computer engineering department	Tehran, Iran

## Skills

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**Programming** Java, Python, C/C++, Matlab, Spark (Map-reduce framework)

**Script** Javascript, HTML, Latex

**Languages** English, Persian, Arabic

## Reference

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### Dr. Abdullah Mueen

Albuquerque, NM

UNIVERSITY OF NEW MEXICO

- [mueen@cs.unm.edu](mailto:mueen@cs.unm.edu)
- [www.cs.unm.edu/~mueen](http://www.cs.unm.edu/~mueen)

### Dr. Hao Yang

Foster City, CA

VISA RESEARCH

- [haoyang@visa.com](mailto:haoyang@visa.com)
- <http://research.visa.com/member.html?uid=hyang>

### Dr. Hui Zhang

Princeton, NJ

NEC LABORATORIES AMERICA INC.

- [hui@nec-labs.com](mailto:hui@nec-labs.com)
- [www.nec-labs.com/hui-zhang](http://www.nec-labs.com/hui-zhang)