

Education

- 2015–Present **PhD candidate, College of Information Sciences and Technology, Pennsylvania State University, State College, PA, USA, (GPA: 3.9).**
- 2013 – 2015 **M.Sc. in Electrical Engineering, Communication Systems, Sharif University of Technology, (GPA:3.85).**
- 2008 – 2013 **B.Sc. in Electrical Engineering, Communications, Sharif University of Technology, (GPA: 3.51).**

Computer Skills

- Advanced **Python(4+ years), TensorFlow(2 years), Linux Programming(4+ years), Shell Programming(3+ years), Matlab(9+ years), C/C++ (9+ years), ImageJ (5+ years), SQL Server (SSMS, SSIS, SSAS) (6+ years), Sharepoint(6+ years), OpenCV(2+ years), L^AT_EX(7+ years)**
- Intermediate **Java(2+ years), HTML & CSS(5+ years), Spark(1+ year), Apache Hadoop & Hive(1+ year), Opnet & Network Simulator (NS2 and NS3)(1 year), AWR Design environment & Microwave Office(1 year), PSpice & Orcad(4 years)**
- Basic **ArcGIS(1 year)**

Work Experiences

- 2017 **Data Scientist Intern, Deep Learning expert, Honeywell International Inc.**
In this project we developed Deep Recurrent Neural Networks in order to estimate time to a failure or time to an event in Auxiliary Power Units of aircrafts. I was responsible for the complete process from ETL of the data from Hive tables, to developing and testing the deep learning models in Tensorflow.
- 2012 – 2015 **Business Intelligence, BI Manager, Tadbir Pardaz Ltd.**
Implementation of **Business Intelligence** based on SQL server services on Automation Reports in Total Broker Solution (TBS) and Mutual Funds. In this project I was responsible for ETL process, creating star schema databases, making data cubes, and visualizing data in different platforms.

Related Courses

- Neural Network (A⁻)
- Data Mining (A)
- Pattern Recognition (A)
- Human Computer Interaction(A)

Projects

- 2017 **Time to Failure analysis in time series using deep recurrent neural nets, Honeywell.**
- 2017–Present **Intelligent Photography Composition using Deep Learning, Advisor: Prof James Z. Wang.**
- 2016–Present **Emotion Recognition from Body Movement using Deep learning, Advisor: Prof James Z. Wang.**
- 2015–Present **Severe Weather Forecasting with Computer Vision and Machine Learning, Advisor: Prof. James Z. Wang.**
- 2013–2015 **Image Processing and Computer Vision in Cultural Heritage, Advisors: Prof. Marvasti & Prof. Amini.**

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- 2011–2012 **Fuzzy Speech Recognition**, Advisor: Prof. Bagheri Shouraki.
- 2014 **Implementation of Asynchronous MAC Protocol on Opnet**, Prof. Pakravan.
- 2013 **implementation of Adaptive Noise Cancellation**, Prof. Babaizadeh.
- 2010 **Holding a workshop on Smart Grid conference**, Prof. Fotowat Ahmadi.
- 2010 **Summer Research internship**, Prof. Fotowat Ahmadi, KavoshCom Asia R&D Group.
- 2010 **Image processing for Chromosome Detection**, Prof. Khalaj.
- 2010 **Implementation of simplified Excel Software using C++**, Prof. Nazerfard.
- 2009 **Design and Implementation of Function Generator**, Prof. Fotowat Ahmadi.

Research Interests

- Deep Learning
- Machine Learning
- Big Data & Data Mining
- Image Processing
- Computer Vision
- Signal Processing
- Data Analysis
- Business Intelligence

Publications

- 2017 [1] **MM. Kamani**, Farshid Farhat, Stephen Wistar, and James Z Wang. Skeleton matching with applications in severe weather detection. *Applied Soft Computing*, 2017.
- 2017 [2] Farshid Farhat, **MM. Kamani**, Sahil Mishra, and James Z. Wang. Intelligent portrait composition assistance - integrating deep-learned models and photography idea retrieval. In *2017 ACM Multimedia*. ACM, 2017.
- 2016 [3] **MM. Kamani**, Farshid Farhat, Stephen Wistar, and James Z. Wang. Shape matching using skeleton context for automated bow echo detection. In *2016 IEEE International Conference on Big Data*. IEEE, 2016.
- 2015 [4] **MM. Kamani**. Image processing in paintings using multispectral imaging. Master's thesis, Electrical Engineering Department, Sharif University of Technology, Iran, 2015.

Honors and Awards

- 2017 Awarded three-years **Academic Computing Fellowship**, Penn State University
- 2016 **NSF Travel Award**, International IEEE Big Data Conference
- 2013 Ranked **19th** in the Nationwide Electrical Engineering University Entrance Exam for post-graduates students (among 40,000 participants)
- 2008 Ranked **7th** in the Nationwide Mathematics and Physics University Entrance Exam (among 300,000 participants)
- 2008–Present Member of the National Organization of **Exceptional Talents** in Iran
- 2008–Present Member of the organization of **Exceptional Talents** at Sharif University of Technology
- 2006 Accepted in the first stage of **National Chemistry Olympiad** (Ranked 4th among 10,000 participants)

Teaching Assistance Experiences

- 2016 **Knowledge Management**, Prof. Guoray Cai, PennState University.
- 2016 **Visual Analytics**, Prof. Guoray Cai, PennState University.
- 2014 **Data Networks**, Prof. Pakravan, Sharif University of Technology.
- 2014 **Communication Circuits**, Prof. Fotowat Ahmadi, Sharif University of Technology.
- 2011 **Digital Signal Processing**, Prof. Shams-o-Ilahi, Sharif University of Technology.
- 2010 **Electronic Principles and Laboratory**, Prof. Shaabani, Sharif University of Technology.