Mohammad Pezeshki

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RESEARCH INTERESTS

- Machine Learning
- Deep Learning
- Feature Representation
- Statistical Machine Learning

EDUCATION

- **Amirkabir University of Technology** (Tehran Polytechnic), Tehran, Iran
  BS Candidate, Computer Engineering, *Sep. 2010 _ June 2014 (expected)*
  GPA: **18.52** / 20 (107 units)

- **NODET** High School, National Organization for Development of Exceptional Talents, Sirjan, Kerman, Iran
  Diploma in Mathematics and Physics, *Sep. 2006 _ Sep. 2010*
  GPA: **19.60** / 20

HONORS AND AWARDS

- Awarded as Outstanding Student in Amirkabir University of Technology, Tehran, Iran, 2011, 2012, 2013.
- Ranked 2nd in Cumulative GPA among 105 undergraduate students in Computer Engineering and IT Department, Amirkabir University of Technology, Tehran, Iran.
- Placed 13th (out of 99 teams), International Data Mining CUP Competitions (DMC 2013), Leipzig, Germany, 2013.
- Offered admission to M.Sc. program in **Artificial Intelligence** at *Amirkabir University of Technology* as talented undergraduate student, 2013.
- Offered admission to M.Sc. program in **Artificial Intelligence** at*Sharif University of Technology* as talented undergraduate student, 2013.
- Acheiving top 0.5% place among all applicants for the University Entrance Nationwide Exam (Approximately 300000 applicants) Iran, 2010.
- Admission to NODET (*National Organization for Development of Exceptional Talents*) entrance exam.

PUBLICATIONS

- M.A. Keyvanrad, **M. Pezeshki** , M.M. Homayounpour (2013). *"Deep Belief Networks for Image Denoising"*. Manuscript submitted for Conference Track of 2nd International Conference on Learning Representations (ICLR2014) , Banff, Canada, April 2014.
- **M. Pezeshki**, S. Gholami, A. Nickabadi . *"Distinction between features extracted using Deep Belief Networks"*. Manuscript submitted for Workshop Track of 2nd International Conference on Learning Representations (ICLR2014) , Banff, Canada, April 2014.

- E. Gohari, M. Mehri, S. Sadeghi, **M. Pezeshki** , F. Rashidi, S. Malakouti, S. Khadivi . *"A Study on Prediction of User's Tendency Toward Purchases in Online Websites Based on Behavior Models"*. In Progress.

RESEARCH EXPERIENCES

- **Research Assistant** , Laboratory for Intelligent Multimedia Processing (IMP), *2012 _ Present*
  Under supervision of Prof. Homayounpour and Mr. Keyvanrad
  In this laboratory, I am working on Machine Learning and more specifically on Deep Learning. My major focus is on Restricted Boltzmann Machine, Deep Belief Networks, and Deep Boltzmann Machines and applying them in some Machine Learning problems such as computer vision.

TEACHING EXPERIENCES

- **Teaching Assistant** , **Programming Languages**, *Fall 2013*
  Under supervision of Prof. Fallah (`msfallah@aut.ac.ir`)
- **Teaching Assistant** , **Data Structures**, *Fall 2012*
  Under supervision of Prof. Dehghan (`dehghan@aut.ac.ir`)
- **Teaching Assistant**, **Advanced Programming**, *Spring 2012*
  Under supervision of Prof. Nourhosseini (`majidnh@aut.ac.ir`)

TOP ACADEMIC COURSE PROJECTS

- **Information Retrieval**,
  Aut-Engine: Implementing a static search engine using both traditional Tf-idf method and Semantic Hashing for content-based document retrieval. This project was done using Java and Matlab
- **Database Systems**,
  Aut-Stack: Implementing a system just like Stackoverflow.com. Our database was a combination of SQL, HBase, and Hadoop. This project was done mainly using Java.
- **Programming Languages**,
  Developing an Interpreter using ML language. This project was done using lex, yacc, and other abilities of OCaml.
- **Design of Algorithms**,
  Implementing a robot path finder. This project was relied on applying Dijkstra algorithm on the visibility graph of the environment. This project was done using Java.
- **Machine language**,
  Developing a previously dominant algorithm for the encryption of electronic data called DES. This project was done using Mips assembly language.

OTHER SCIENTIFIC ACTIVITIES

- Organizer and Lecturer of **An Introduction to Deep Learning**
  Held on 7th December 2013. (Amirkabir University of Technology)
- Online Course, **Neural Networks for Machine Learning**
  Offered by *Prof. Hinton* (University of Toronto)
- Online Course, **Machine Learning**
  Offered by *Prof. Ng* (Stanford University)

TECHNICAL SKILLS

- **Programming Languages:**,
  Expert in: Java, C++, Matlab
  Familiar with: C#, JOGL (Java OpenGL), Mips and X86 assembly, Android programming
- **Database Systems:**,
  Expert in: MySQL, HBase, Hadoop
  Familiar with: MongoDB, Neo4j
- **Tools and Frameworks:**,
  Expert in: Weka, Octave, Rapidminer, R

LANGUAGES

- **Persian** (Farsi) : *Mother tongue (Native)*
- **English** : *TOEFL score: 98 (Reading:25,Listening:29,Speaking:23,Writing:21)*
  GRE: Quantitative: 164, Verbal: 149, Writing: 3.0
- **French**: Basic knowledge

REFERENCES

- **Professor Mohammad Mehdi Homayounpour**
  Computer Engineering and IT Department, Amirkabir University of Technology
  Email: `homayoun@aut.ac.ir`
- **Professor Shahram Khadivi**
  Computer Engineering and IT Department, Amirkabir University of Technology
  Email: `khadivi@aut.ac.ir`
- **Professor Ahmad Nickabadi**
  Computer Engineering and IT Department, Amirkabir University of Technology
  Email: `nickabadi@aut.ac.ir`
- **PhD Candidate Mohammad Ali Keyanrad**
  Computer Engineering and IT Department, Amirkabir University of Technology
  Email: `keyvanrad@aut.ac.ir`

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