Ali Janalizadeh Choobbasti

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RESEARCH INTERESTS

- Reinforcement Learning
- Online Learning
- Adversarial Learning
- Multi-Agent Systems
- Natural Language Processing

AREAS OF INTEREST

- Stock Market Prediction
- Dynamic Pricing
- Game A.I.
- Dialogue Systems

EDUCATION

- **Amirkabir University of Technology (Tehran Polytechnics)** (**Ranked 80** globally by subject of Engineering) Sep 2014 – Present
  - –B.Sc. in Computer Engineering - Information Technology
    - –Cumulative GPA (via 120 passed units): 17.11/20 (3.46/4)
    - –**Last 4 semesters' GPA: 17.74/20 (3.71/4)**
    - –**Selected Coursework GPA[*]: 18.99/20 (3.91/4)**
- **Shahed Highschool** Sep 2010 –Jun 2014
  - –High School Diploma
    - –Field: Mathematics and Physics
    - –Cumulative GPA: 19.07/20 (3.83/4)

PROFESSIONAL EXPERIENCE

- **Part-time Data Scientist and Big Data R&D Engineer at Miras Technologies International** Jun 2017 – Present

RESEARCH EXPERIENCE

- **Research Assistant**, Miras Tech. Research & Development Laboratory Jun 2017 – Present

PUBLICATIONS

- **Advertisement Recognition Using Mode Voting Acoustic Fingerprint**, Reza Fahmi, Hosein Abedi Firouzjaee, **Ali Janalizadeh Choobbasti**, S. H. E. Mortazavi Najafabadi, Saeid Safavi, International Conference on Robotics and Machine Vision (ICRMV 2017), vol. 10613, p. 106130D. International Society for Optics and Photonics, Dec 2017
  - –This research was done for developing an advertisement recognition system at Miras Technologies International.
- **MirasVoice A bilingual (English-Persian) speech corpus**, Amir Vaheb, **Ali Janalizadeh Choobbasti**, S. H. E. Mortazavi Najafabadi, Saeid Safavi, Behnam Sabeti, Proceedings of the Eleventh International Conference on Language Resources and Evaluation (LREC 2018), May 2018
  - –This research was done to develop a voice based biometric security system at Miras Technologies International.
- **MirasText An Automatically Generated Text Corpus for Persian**, Behnam Sabeti, Hossein Abedi Firouzjaee, **Ali Janalizadeh Choobbasti**, S. H. E. Mortazavi Najafabadi, Amir Vaheb, Proceedings of the Eleventh International Conference on Language Resources and Evaluation (LREC 2018), May 2018
  - –This research was done to develop an accurate word embedding model for the Farsi language at Miras Technologies International.

[*] Principles of Computer & Programming: 19.75/20, Advanced Computer Programming: 20/20, Data Structures & Algorithms: 19/20, Engineering Statistics: 19.5/20, Algorithms Design: 20/20, Principles of Database Design: 18.7/20, Database Design Lab: 20/20, Topics in Computer Science: 20/20, Research & Technical Presentation: 20/20, Artificial Intelligence & Expert Systems: 14/20 (I was sick on the final), Operating Systems:17.4/20, Operating Systems Lab: 20/20, Computer Architecture: 19.6/20, Engineering Ethics: 20/20

PAPERS IN PREPERATION

- **Investigating Language Variability on the Performance of Speaker Verification Systems**, Amir Vaheb, **Ali Janalizadeh Choobbasti**, S. H. E. Mortazavi Najafabadi, Saeid Safavi, International Conference on Speech and Computer (SPECOM 2018).
  Apr 2018– Present
- **A Novel Incremental Method For Clustering Temporal Graphs**, Sina Baharlouei, **Ali Janalizadeh Choobbasti**, Maryam Amirhaeri. Jan 2018– Present
- **MirasSentiment The Largest Labeled Text Corpus for Sentiment Analysis**, Behnam Sabeti, **Ali Janalizadeh Choobbasti**, S. H. E. Mortazavi Najafabadi. Feb 2018– Present
- **FarsChat: An Automatically Generated Farsi Text Dialogue Corpus for Multi-Turn Dialogue Systems**, **Ali Janalizadeh Choobbasti**, Reza Safabakhsh.
  May 2018– Present
- **IRVoice: An Automatically Generated Speech Corpus for Research and Development**, **Ali Janalizadeh Choobbasti**, Erfan Gholamian, Mehdi Rasti.
  May 2018– Present

TEACHING ASSISTANTSHIPS

Fundamentals of Data Mining Feb 2017 – Jul 2017
Responsibilities included *Holding TA sessions to teach python frameworks for data cleaning and machine learning + Design and grading assignments and exams + Revising Syllabus* (approximately 50 Students)
Under the supervision of Dr. Ehsan Nazerfard

Advanced Computer Programming Feb 2017 – Jul 2017
Responsibilities included *Design and grading assignments and exams + Revising Syllabus* (116 Students)
Under supervision of Dr. Seyed Majid Noorhosseini

Computer Architecture Feb 2017 – Jul 2017
Responsibilities included *managing 12 Teaching Assistants, Holding sessions to define projects and hold Q&A's, designing and grading projects and homework.* (117 Students)
Under the supervision of Dr. Saeid Shiri Ghidary

Technical English Feb 2017 – Jul 2017
Responsibilities included *Grading assignments and exams* (approximately 30 Students)
Under the supervision of Dr. Saeedeh Momtazi

System Analysis and Design Feb 2016 – Jul 2016
Responsibilities included *Team coordinator + Holding classes + Design and grading assignments and projects* (approximately 50 Students)
Under the supervision of Mr. Bahman Pourvatan

Principals of Computer and Programming Feb 2016 – Jul 2016
Responsibilities included *Holding practical exams + Holding workshops + Holding classes + Design and grading assignments and projects* (approximately 50 Students)
Under the supervision of Dr. Saeid Shiri Ghidary

Data Structures & Algorithms Feb 2016 – Jul 2016
Responsibilities included *Design and grading assignments* (approximately 120 Students)
Under the supervision of Dr. Mehdi Dehghan Takht Fooladi

Advanced Computer Programming Feb 2016 – Jul 2016
Responsibilities included *Team coordinator + Holding classes + Design and grading assignments and projects* (approximately 50 Students)
Under the supervision of Mr. Bahman Pourvatan

Principals of Computer and Programming Feb 2015 – Jul 2015
Responsibilities included *Team coordinator + Holding classes + Design and grading assignments and projects* (approximately 50 Students)
Under the supervision of Mr. Bahman Pourvatan

HOBBIES

- **Hiking, Eco-cultural Tour and Travel**
  – I have visited countries like: England, Saudi Arabia and also numerous cities in Iran such as: Mashhad, Babolsar, Sari, Rasht, Tabriz, Shiraz, etc.

HONORS & AWARDS

- **Best Paper and Presentation Award**, International Conference on Robotics and Machine Vision (ICRMV). 2017
- **Finalist** in **stock market prediction challenge**, Problem.ir. 2017
- Ranked **29**th among **200** teams in the task of revenue prediction, Data Mining Cup (DMC). 2017
- **Ranked Top 4 in term of GPA** among all students in the field of Information Technology, Amirkabir University of Technology. 2014 – Present
- **Ranked Top 0.4%** among near 250,000 Participants in the National Entrance Exam among all Iranian Students in Math. & Physics. 2014
- **Ranked Top 0.1%** among all Iranian Students in Foreign Languages. 2014
- Selected as a qualified person at the first and second stage of **Iranian National Computer Olympiad** 2012

TECHNICAL SKILLS

- **Programming Languages:**
  Expert in: Java, C/C++, Python,
  Familiar with: Scala, MATLAB, R
- **Frameworks and Tools:**
  Expert in: Tensorflow, Keras, NLTK, Scipy, OpenCV, Git
  Familiar with: Akka, Docker, OpenGL, Theano, CUDA.
- **Database Systems:**
  Expert in: Elasticsearch, MySQL
  Familiar with: MongoDB.
- **Typesetting:**
  LaTeX, Microsoft Word.
- **Operating System:**
  Windows, Linux (Ubuntu and Debian).
- **Web Development:**
  HTML5, CSS, Java Script, jQuery, XML.
- **Other:**
  Microsoft Visio, Microsoft Excel, Microsoft Powerpoint, UML, Adobe Photoshop, Gimp.

LANGUAGES

- **Persian (Farsi)**: Native
- **English**:
  - **TOEFL ibt: TBA/120**
    - Reading TBA/30, Listening TBA/30, Speaking TBA/30, Writing TBA/30
  - GRE: Quantitative: TBA/170, Verbal TBA/170, Analytical Writing: TBA/6

ONLINE COURSEWORK CERTIFICATES

- Algorithms: Design and Analysis, Part 1
- Algorithms: Design and Analysis, Part 2
- Machine Learning Foundations
- Machine Learning
- Machine Learning: Regression
- Supervised Machine Learning
- Cluster Analysis and Unsupervised Learning
- Hidden Markov Models
- Neural Networks for Machine Learning
- Modern Deep Learning
- Ensemble Methods for Machine Learning
- Unsupervised Deep Learning
- Natural Language Processing
- Recurrent Neural Networks
- Bayesian Machine Learning: A/B Testing
- NLP with Deep Learning
- Artificial Intelligence: Reinforcement Learning
- GANs and Variational Autoencoders
- Advanced A.I.: Deep Reinforcement Learning
- Zero to Deep Learning with Keras
- Convolutional Neural Networks
- Advanced Computer Vision
- Scrapy: Powerful Web Scraping & Crawling
- Scala and Functional Programming

SELECTED ACADEMIC PROJECTS

- **Final Thesis**
  - –Design and Implementation of an **attention-based SEQ2SEQ LSTM dialogue system**
    - –This project is in progress. I am currently scraping as much dialogue data as I can from Farsi movie subtitles. The dialogue system has already been implemented and tested on a small corpus of **200,000** utterances scraped from my personal Telegram messenger chat data where a BLEU score of 3.2 was attained. Accomplished using Python, Tensorflow, and Scrapy
    - –Under supervision of Reza Safabakhsh
- **Kaggle Competition**
  - –Convolutional Neural Network for Human Facial Expression of Emotion Recognition. Accomplished using Python & Tensorflow.
- **Fundamentals of Data Mining(Audited)**
  - –Developed a model for predicting which landing page works best for an E-Commerce website, applied an Artificial Neural Network model for K-class classification using a Softmax layer. Model validation was then done using Bayesian A/B testing. Accomplished using Python & Theano
- **Personal Projects**
  - –Design and implementation of a chess playing agent. The agent used a Min-Max algorithm with alpha-beta pruning. The engine has over gone perft testing to make sure of its soundness. Board representation was done using the UCI protocol. Accomplished Using C
  - –Design and development of an Ethical Key-logger (Code not made available for obvious reasons). Accomplished Using C++
- **Artificial Intelligence & Expert Systems**
  - –Design and development of a search problem solving API. Accomplished Using Java
  - –Design and development of an agent in UC Berkeley's famous Pacman competition (Code was not made public as per request of professor). This agent used Monte-carlo tree search and won every other agent designed by fellow classmates. Accomplished Using Python
- **Data Structures & Algorithms**
  - –Design and development of an API for graphs and adding an option for path-finding, search and returning its clustering coefficient, solving max flow min cut, topological sort, and the minimum spanning tree of a valid graph. Accomplished Using Java
- **Advanced Computer Programming**
  - –Design and development of an Online Strategic Game. A multiplayer online strategy game that also had single player mode that was played against one or more agents. Accomplished Using Java
  - –Design and development of a graphical game named jRobokill with semi-intelligent agents. Accomplished using Java
- **Computer Networks**
  - –Implementing a Subnet calculator.
  - –Configuring multiple network devices concurrently via SSH or Telnet.
  - –DHCP client simulator for testing a DHCP server in the local network.
  - –Collecting information from routers and storing it in a MySQL database.
  - –OSPF network discovery via SNMP and building the OSPF topology.
  - –All the projects mentioned above were Accomplished using Python 2.7 and GNS3.
- **Computer Graphics**
  - –Design and implementation of a CAD software for drawing different 2D and 3D objects and supporting different clipping algorithms. Accomplished Using C++

REFERENCES Available Upon Request.