



Behrooz Vedadian

Résumé

Education

- 2013–Present **Ph.D. Candidate**, *Amirkabir University of Technology*, Artificial Intelligence, GPA – 19/20.
Research field: “Automatic Machine Translation” under supervision of Dr. Mohammad Rahmati and Dr. Shahram Khadivi
- 2005–2008 **M.Sc.**, *Amirkabir University of Technology*, Communication Systems Engineering, GPA – 15.01/20.
Thesis title: “Signal Detection in Nonstationary Environments using Wavelets” under supervision of Dr. Hamidreza Amindavar
- 2000–2005 **B.Sc.**, *Sharif University of Technology*, Electrical Engineering, GPA – 15.10/20.
Thesis title: “Speaker Identification using HMMs” under supervision of Dr. Mohammad Mahdi Nayebi
- 1996–2000 **Diploma**, *National Organization of Development of Exceptional Talents(NODET)*, Mathematics and Physics, GPA – 19.5/20.

Experience

Vocational

- 2015–Present **Researcher and Senior Software Engineer**, TARGOMAN INTELLIGENT PROCESSING CO..
- A Computer Assistant for translation was designed and implemented which is named **Tarjomyar**, built using javascript language while preserving the modularity and object oriented design.
 - An experimental Neural Machine Translator for English-Persian was trained and successfully integrated into **Tarjomyar**.
 - Using basics from `libevent` a very fast http API server was developed having MarianNMT at its core (`#`).

2013–2015 **Researcher and Senior Software Engineer**, HLT LAB, Amirkabir University of Technology.

- We used Moses open source statistical translation system to develop an online translation service for Persian-English languages.
- A text processing library was developed to preprocess, tokenize and enhance input sentences given to translation service.
- We also developed a *robust* open source phrase based statistical machine translation decoder title **Targoman** available on **GitHub**. This was done to remedy the instability and unintegrated software design of Moses toolkit.

2009–2014 **R&D Engineer**, HODA SYSTEM CO. LTD..

- We developed a Persian printed text recognition software which included layout analysis.
- We also tailored the OCR library for extraction of Egyptian ID card information in course of cooperation with Egypt City Bank Co.
- We also incorporated natural language processing for improving the OCR results quality
- I developed a couple Web Applications for a demonstration version of digital document archiving that used OCR and image processing techniques to ease information extraction

Teaching

2001 **Teacher's Assistant**, COMPUTER PROGRAMMING, Sharif University of Technology.

2014 **Teacher's Assistant**, STATISTICAL NATURAL LANGUAGE PROCESSING, Amirkabir University of Technology.

Instructed by Dr. Shahram Khadivi

Miscellaneous

1998–2013 **Freelance**.

I have participated in various software development tasks using wide range of tools and programming languages ranging from FoxPro! to 8051 assembly and prepared a detailed Pascal programming tutorial for **Roshd magazine**.

Awards

- 1997 Ranked 5th in national computer programming contest
- 1998 Ranked 3rd in national computer programming contest
- 1999 Qualified to enter the second level of national students Physics Olympiad
- 1999 Qualified to enter the second level of national students Mathematics Olympiad
- 2013 Ranked 9th in national Ph.D. entrance examination

Computer skills

- Basic Perl, JAVA, Inkscape
- Intermediate Linux, BASH Scripting
- Advanced C++, C#, PYTHON, L^AT_EX, MatLab, PHP, HTML, JavaScript, CSS

Machine Learning

- Toolkits Proficient with PyTorch, Strongly familiar with Tensorflow, Familiar with Jax
- Models Expert on Transformers, Advanced knowledge on ConvNets, Familiar with GANs
- Foundations Deep familiarity with measure theory, modern statistics and linear algebra

Languages

Persian **Mothertongue**

English **Fluent**

Interests

- Research on Machine Learning
- Drawing and Painting
- Storytelling and Cinema
- Mathematics
- Graphic Design