

Amirhossein Abaskohi

September 19, 2000

Masters Student Majoring in Computer Science

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Education

University Of British Columbia	SEPT 2023 - Now
M.Sc in Computer Science	
Department of Computer Science	
• GPA: A	
University Of Tehran	SEPT 2018 - APR 2023
B.Sc in Computer Engineering	Ranked top 10% in class
Department of Electrical and Computer Engineering	
• Cumulative GPA: 17.94/20.00 (3.8/4) [Last Two Years GPA: 18.42 (4/4)] (Faculty Average: 15.10/20.00)	
Motahari High School	SEPT 2015 - JUL 2018
Diploma in Mathematics and Physics	
GPA: 19.81/20	

Research Interests

- Natural Language Generation
- Cross-lingual NLP
- Ethics and Fairness in ML
- NLP for Common-sense Reasoning
- Multi-modal Models
- Human Centered AI

Publications

Benchmarking ChatGPT for Persian: A Preliminary Study	2024
Amirhossein Abaskohi*, Sara Baruni*, Mostafa Masoudi*, Nesa Abbasi, Mohammad Hadi Babalou, Ali Edalat, Sepehr Kamahi, Samin Mahdizadeh Sani, Nikoo Naghavian, Danial Namazifard, Pouya Sadeghi, and Yadollah Yaghoobzadeh	
LREC-COLING 2024	
Paraphrasing-Guided Data Augmentation for Contrastive Prompt-Based Few-Shot Fine-Tuning	2023
Amirhossein Abaskohi, Yadollah Yaghoobzadeh, Sascha Rothe	
Annual Meeting of the Association for Computational Linguistics (ACL) 2023	
A Large-Scale Analysis of Persian Tweets Regarding Covid-19 Vaccination	2023
Taha ShabaniMirzaei, Houmaan Chamani, Amirhossein Abaskohi, Zhivar Sourati Hassan Zadeh, Behnam Bahrak	
Springer’s Social Network Analysis and Mining Journal	
PEACH: Pre-Training Sequence-to-Sequence Multilingual Models for Translation with Semi-Supervised Pseudo-Parallel Document Generation	2023
Amirhossein Abaskohi*, Alireza Salemi*, Sara Tavakoli, Yadollah Yaghoobzadeh, Azadeh Shakeri	
Workshop on Technologies for Machine Translation of Low-Resource Languages (LoResMT) co-located with EACL 2023	
Persian Emotion Detection using ParsBERT and Imbalanced Data Handling Approaches	2022
Amirhossein Abaskohi, Nazanin Sabri, Behnam Bahrak	
arXiv preprint arXiv:2211.08029	
UTNLP at SemEval-2022 Task 6: A Comparative Analysis of Sarcasm Detection Using Generative-based and Mutation-based Data Augmentation	2022
Amirhossein Abaskohi, Arash Rasouli*, Tanin Zeraati*, Behnam Bahrak	
International Workshop on Semantic Evaluation co-located with NAACL 2022	
Automatic Speech recognition for Speech Assessment of Persian Preschool Children	2022
Amirhossein Abaskohi, Fatemeh Mortazavi, Hadi Moradi	
arXiv 2203.12886	

Research Experience

Graduate research assistant at the University of British Columbia

JAN 2024 - Nov

Under Supervision of Prof. [Giuseppe Carenini](#), Prof. [Brad Hackinen](#), and Prof. [Francesco Trebbi](#)

This is joint project with Western University's Ivey School and University of California Berkeley on regulatory documents.

Undergraduate research assistant at the University of Tehran

JUL 2022 - MAR 2023

Under Supervision of Prof. [Yadollah Yaghoobzadeh](#) and Dr. [Sascha Rothe](#)

I am working on the influence of data augmentation methods for contrastive-based prompt learning in the RoBERTa language model.

Undergraduate research assistant at the University of Tehran

NOV 2021 - JUN 2022

Under Supervision of Prof. [Azadeh Shakery](#) and Prof. [Yadollah Yaghoobzadeh](#)

I was working on creating pseudo-translation documents for the pre-training stage of a multilingual transformer-based language model. We mapped sentences from one language to another by using bilingual dictionaries with distinct monolingual corpora. The quality of mapped sentences is improved by training a model reordering to enhance the quality of sentences for a language.

Undergraduate research assistant

SEPT 2021 - JUN 2022

Under Supervision of Prof. [Pedram Rooshenas](#)

I developed a VAE-based generative model to simultaneously produce a picture and its caption. We had two goals: 1) Checking the effect of text and image fusion in the latent space on the quality of generative models, and 2) Using the model to create artificial image captioning datasets.

Undergraduate research assistant at the University of Tehran

AUG 2021 - MAR 2023

Under Supervision of Prof. [Behnam Bahrak](#)

I am working in the Data Analytics Lab of the University of Tehran. I have done several projects, including binary sarcasm classification and Persian emotion detection. I recently started a project on detecting people suffering from BPD based on social media data.

Undergraduate research assistant at the University of Tehran

NOV 2020 - SEPT 2021

Under Supervision of Prof. [Hadi Moradi](#)

We developed a cognitive test for preschoolers to determine whether or not they are ready for school. At first, as our system was an AI-powered test-taking system, I was working on the website's back end. After that, for the ASR system in speech-based test, we suggested a new pre-train objective for the Wav2Vec model, and we reached a state-of-the-art model for automatic speech recognition.

Teaching Experience

University of British Columbia

- CPSC322: Introduction to Artificial Intelligence [Mehrdad Oveisi](#)
- CPSC322: Introduction to Artificial Intelligence [Jordon Johnson](#)

SPRING 2024

FALL 2023

University of Tehran

- Artificial Intelligence Prof. [Hakimeh Fadaie](#) and [Yadollah Yaghoobzadeh](#)
- Design and Analysis of Algorithms Prof. [Javad Dousti](#) and Prof. [Hamid Mahini](#)
- Engineering Probability and Statistics Prof. [Behnam Bahrak](#)
- Operating systems Prof. [Mehdi Kargahi](#)
- Programming languages and Compilers (Chief TA) Prof. [Fateme Ghasemi](#)
- Data Structures Prof. [Heshaam Faili](#)
- Discrete mathematics Prof. [Siamak Mohammadi](#)
- Computer Architecture Prof. [Saeed Safari](#)

FALL 2021, SPRING 2022

SPRING 2021, SPRING 2022

FALL 2020

SPRING 2022, FALL 2022

SPRING 2021, FALL 2021, SPRING 2022, FALL 2022

FALL 2020, FALL 2021

SPRING 2020, FALL 2020

FALL 2021, SPRING 2022

Volunteering

- Artificial Intelligence and Machine Learning Mentor in Summer School 2021
- Freelance Content Creation on Medium
- Freelance Content Creation on YouTube
- Working on The Backend API System of Cognitive Tests For Preschool Children Project

SUMMER 2021

JUL 2021-PRESENT

JUL 2021-PRESENT

NOV 2020-FEB 2021

Extra Courses

- Natural language processing specialization
- Reinforcement Learning Specialization
- Machine learning
- Advanced Computer Vision with TensorFlow
- Intro to Computer Vision and Image Processing
- Generative Adversarial Networks
- Deep learning specialization
- Mathematics for Machine Learning
- Cloud Computing Concepts, Part 1
- Big data specialization

Honors and Awards

Supporter Foundation of University of Tehran Scholarship

Sept 2020

Awarded to top 500 students among 35000 students in the university.

Best Undergraduate Project Award

Sept 2022

My project on "Pre-Training Sequence-to-Sequence Multilingual Models for Translation with Semi-Supervised Pseudo-Parallel Document Generation" has been awarded as the best undergraduate project in the 16th Project Day competition of ECE school of the University of Tehran.

Admission to University of Tehran

Sept 2018

Ranked 46th (regional rank), and 1125th (national rank) among 144,437 participants in the Iranian Nationwide University Entrance Exam for Mathematics and Physics discipline.

Iran's Elites Foundation Membership and Financial Support

Nov 2021

After the Automatic Speech Recognition for preschool children project, I have been awarded a 1-year scholarship from this foundation.

Skills

Programming Languages: Python, C\C++, SQL, C#, Java, Dart, JavaScript, GNU Octave, MATLAB, Verilog HDL

Technologies: Git, Docker, Jupyter, Google Colab, L^AT_EX

Tools: Tensorflow, Matplotlib, Pytorch, Jupyter, CUDA, Django, Flask, GraphQL, Apache Airflow, PowerBI

Operating Systems: Linux (Ubuntu, Parrot, Kali), Windows, Cloudera

Work Experience

Back-end Developer

Nov 2022 - Oct 2023

Mate Machine Inc

- **Description:** Experienced in optimizing and maintaining the back-end system of a dynamic dating social network application, ensuring robust functionality and superior performance.
- **Skills used:** ASP.NET, MicoService, Docker, CI/CD, EntityFramework, GRPC, RabbitMq, Grafana, DataDog, PowerBI, Swagger, Agile, Scrum

Back-end Developer

Dec 2022 - May 2023

Ramand

- **Description:** I was working on the back-end of a bourse trading system for Farabi brokerage.
- **Skills used:** ASP.NET, RabbitMq, Dapper, Agile, Scrum, Grafana

Machine Learning Researcher

Sept 2021 - Jan 2023

University of Tehran Science and Technology Park

- **Description:** I was involved in developing a prediction model to identify individuals eligible for insurance coverage at Achareh, an Iranian service provider company.
- **Skills used:** Python, Research, Tensorflow, PyTorch, NLP, Data Analysis

Full-stack developer internship

Jun 2022 - Sept 2022

System Group

- **Description:** I was working on Abramad which provides businesses with a variety of services and helps them expand by taking advantage of cloud computing with greater speed and security.
- **Skills used:** ASP.NET, CI/CD, Angular

Financial data science remote internship

Aug 2021 - Oct 2021

World Data Science Institute

- **Description:** In this internship I have worked with a group from all around the world remotely on a online payment application with API system and some machine learning algorithms for payment fraud detection.
- **Skills used:** Python, Tensorflow, Research, Project Leadership, Flask, Django, GraphQL

Back-end Developer

Jun 2020 - Mar 2021

Idea Varzan System

- **Description:** I was working on back-end API system for a project management application called SevenTask.
 - **Skills used:** ASP.NET, Swagger, SeqLog, Agile, Scrum, Grafana, Dart
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Notable Projects

Python Code Generator

Python, Huggingface Transformers

Based on the dataset I obtained, I constructed a GPT2 transformer model for this project. I downloaded several python repositories from github and used them to train my model.

Advanced Programming Course Projects

C++

These projects are: famous GUI game: Super Mario, A simple movie network like Netflix, and a simple interpreter.

Artificial Intelligence Projects

Python, Sklearn, Numpy, Pandas, Matplotlib

These project contains: An multi layer neural network implementation from scratch on fashion MNIST dataset, search algorithms, A* algorithm visualization, Naive Bayes sentiment analysis and house price prediction which I participated in the related Kaggle's competition as well.

Sophia Compiler

Java, ANTLR

In this project, I have implemented a complete compiler for a object-oriented language called Sophia. This compiler, checks the code first and then generates the code using Jasmin.

Iranian Music Genre Detection

Python, Tensorflow, Sklearn, Librosa, Flask

In this project, I created used different classifying and clustering models like KNN, SVM, MLP, and KMeans to detect genre of an Iranian music.

Stop Sign Classifier

Python, PyTorch, Pillow

This project was my final project for Intro to Computer Vision and Image Processing course which I use CNN to classify stop sign images.

Premier League Infringing IPs Detection

Python, Apache Airflow, Tensorflow

In this project I created a apache airflow pipeline with different machine learning models to detect the infringing IPs for the premier league matches.

Cafe Bazar Gender Detection

Python, Sklearn

Based on the applications installed, I utilized simple machine learning models to predict the gender of Cafe Bazar (Iranian Android app store) users in this project.