AmirAli Kaboli | Curriculum Vitae

Amirkabir University of Technology - Department of Mathematics and Computer Science

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EDUCATION

o **Bachelor of Science**   2017–2021(expected)

  ⬤ Amirkabir University of Technology (Tehran Polytechnic)   *Tehran-Iran*
  Ranked 2nd in Iran according to QS Ranking
  - Computer Science
    · GPA: 17.87/20 (3.86/4)
    · Thesis: Intent Detection in Conversional Recommender Systems

HONORS

o Ranked 4th in Computer Science, among 64 students, Amirkabir University of Technology, Tehran, Iran.
o Ranked within the top 1% in university entrance exam, among more than 148,000 participants. [Summer 2017]
o Granted admission from Talented Student Office of Amirkabir University of Technology for graduate study.

RESEARCH INTERESTS

o Natural Language Processing
o Machine Learning
o Data Mining
o Information Retrieval

TEACHING EXPERIENCE

o Artificial Intelligence Teacher Assistant   [Fall 2020]
  - Under supervision of Dr. Saeed Shiry Ghidary
  - Defined class assignments
  - Corrected & graded assigments part

o Introduction to the Theory of Computation Teacher Assistant   [Fall 2019]
  - Under supervision of Dr. Fatemeh Zare Mirakabad
  - Held class for about 10 students
  - Corrected & graded assignments part

o Foundation of Combinatorics Teacher Assistant   [Spring 2019]
  - Under supervision of Dr. Saeed Kazem
  - Held class for about 30 students

RESEARCH EXPERIENCE

o Intent Detection in Conversational Recommender Systems   [Spring 2021-Present]
  - Under supervision of Dr. Mohammad Akbari
  - Used MultiWOZ dataset

- Examined Stack-Propgation paper on my dataset
- Examined Co-Interactive transformer paper on my dataset
- Examined Bi-model with decoder paper on my dataset
- Built a two steps method with combining a binary classification with Fasttext for non-intent utterances and Bi-model with decoder for intent classes

o Member of iDS Lab [Spring 2021-Present]
- Under supervision of Dr. Mohammad Akbari

WORK EXPERIENCE

o **Data Scientist**	Mar 2021–Sep 2021	o **Machine Learning Engineer**	Oct 2019–Feb 2021
🛍 Cafe Bazaar	*Tehran-Iran*	Sotoon - AI Part	*Tehran-Iran*

I have worked in Hezardastan Group since Oct 2019. It contains Cafe Bazaar(local app store with more than 45M active users), Divar(buy & sell advertisements platform with more than 35M users), Sotoon(cloud & AI services provider). In Sotoon, I have prepared codes and trained models for production as microservices on distributed systems. In Cafe Bazaar, I have worked on improving an apps recommender system that contains recommendation and ranking parts. It has been evaluated by both hit-rate and user engagement metrics.

ACADEMIC PROJECTS

o Papers Recommender [Spring 2021]
- Used SVD matrix factorization as Collabrative Filtering
- Used Doc2Vec as Content-Based Filtering
- Implemented a Hybrid method with combining above methods

o Captcha Detection [Spring 2021]
- Used a method with using PCA plus Random Forest
- Used Convolutional Neural Networks

o Bank's Customers EDA and Classification [Spring 2021]
- Used EDA techniques to find relations between features and find best features
- Used Decision Tree for classifying personal loan customers

o Earthquake Analysis on Spatial Data [Spring 2021]
- Used spatial libraries like GeoPandas and Folium
- Estimated a location for building a new station with the most coverage

o Persian Poet Detection [Fall 2020]
- Used classic methods like SVM, Random Forest and AdaBoost
- Used Fasttext for representations and classification
- Used Recurrent Neural Networks like LSTM
- Implemented an UI demo with Streamlit library

o Persian Language Model [Fall 2020]
- Used N-Grams with various smoothing functions
- Used Recurrent Neural Networks like LSTM

o Disease Detection based on Reviews [Fall 2020]
- Used TF-iDF vectorizing plus various methods like Logistic Regression and Random Forest
- Implemented an UI demo with Streamlit library

o Persian News Classification [Fall 2020]
- Implemented both char-based and word-based classification
- Used TF-iDF vectorizing plus SVM

o Houzz Data Scrapper [Fall 2020]
- Used Scrapy libarary to implement a spider over houzz.com

o Persian Email Spam Detection [Fall 2020]

- Used TF-iDF vectorizing plus Naive Bayes and KNN

o <u>Twitter Sentiment Analysis</u> [Fall 2020]
  - Used Count vectorizing plus SVM

o <u>Persian News Retrieval</u> [Spring 2020]
  - Built inverted index and champion lists
  - Used TF-iDF vectorizing
  - Used Cosine similary measure to find related documents based on a query

o <u>Machine Learning Algorithms</u> [Spring 2020]
  - Implemented popular Regression and Classification algorithms without using libraries

o <u>Artificial Intelligence Class Projects</u> [Spring 2019]
  - Searching algorithms
  - Regression using genetic algorithm
  - Document's image alignment

COURSES

o Special Topics in Data Mining (M.Sc) [Spring 2021]
  - Data Science
  - Grade: 19.25/20 (A^+)
o Data Mining [Spring 2021]
  - Grade: 20/20 (A^+)
o Natural Language Processing (M.Sc) [Fall 2020]
  - Grade: 18.5/20 (A^+)

o Special Topics in Computer Science [Fall 2020]
  - Social Networks Analysis
  - Grade: 20/20 (A^+)
o Information Retrieval [Spring 2020]
  - Grade: pass (pass/fail system due to COVID-19)
o Artificial Intelligence [Spring 2019]
  - Grade: 20/20 (A^+)

ONLINE COURSES

o <u>Machine Learning</u>

o <u>Natural Language Processing with Deep Learning</u>
  - Chris Manning
  - In Progress

o <u>Deep Learning Specialization</u>
  - Andrew Ng
  - In Progress

o <u>Advanced Python Programming, project based</u>

EXAM SCORES

o TOEFL iBT: will be taken on Nov 13, 2021
o GRE General: will be taken on Nov 15, 2021

SKILLS

Programming Languages:	C/C++, Python
Libraries:	Numpy, Pandas, Scikit-Learn, Pytorch, Matplotlib, Seaborn, NLTK, Streamlit, Pyspark
Web Technologies:	HTML, CSS, MySQL, Django
Operating Systems:	Linux, Windows
Miscellaneous:	LaTeX, Jupyter, Git, Bash

❶ References, Further information, and Proofs are available upon Request