AmirAli Kaboli | Curriculum Vitae

Amirkabir University of Technology - Department of Mathematics and Computer Science

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EDUCATION

- **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

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

RESEARCH INTERESTS

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

TEACHING EXPERIENCE

- Artificial Intelligence Teacher Assistant [Fall 2020]
  - Under supervision of Dr. Saeed Shiry Ghidary
  - Defined class assignments
  - Corrected & graded assigments part
- 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
- Foundation of Combinatorics Teacher Assistant [Spring 2019]
  - Under supervision of Dr. Saeed Kazem
  - Held class for about 30 students

RESEARCH EXPERIENCE

- 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
Cafe Bazaar *Tehran-Iran*

o **Machine Learning Engineer** Oct 2019–Feb 2021
Sotoon - AI Part *Tehran-Iran*

I've 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've prepared codes and trained models for production as microservices on distributed systems. In Cafe Bazaar, I've worked on building an apps recommender system that contains recommendation and ranking parts.

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

- Twitter Sentiment Analysis [Fall 2020]
  - Used Count vectorizing plus SVM
- Persian News Retrieval [Spring 2020]
  - Built inverted index and champion lists
  - Used TF-iDF vectorizing
  - Used Cosine similary measure to find related documents based on a query
- Machine Learning Algorithms [Spring 2020]
  - Implemented popular Regression and Classification algorithms without using libraries
- Artificial Intelligence Class Projects [Spring 2019]
  - Searching algorithms
  - Regression using genetic algorithm
  - Document's image alignment

COURSES

- Special Topics in Data Mining (M.Sc) [Spring 2021]
  - Data Science
  - Grade: 19.25/20 (A^+)
- Data Mining [Spring 2021]
  - Grade: 20/20 (A^+)
- Natural Language Processing (M.Sc) [Fall 2020]
  - Grade: 18.5/20 (A^+)
- Special Topics in Computer Science [Fall 2020]
  - Social Networks Analysis
  - Grade: 20/20 (A^+)
- Information Retrieval [Spring 2020]
  - Grade: pass (pass/fail system due to COVID-19)
- Artificial Intelligence [Spring 2019]
  - Grade: 20/20 (A^+)

ONLINE COURSES

- Machine Learning
- Natural Language Processing with Deep Learning
  - Chris Manning
  - In Progress
- Deep Learning Specialization
  - Andrew Ng
  - In Progress
- Advanced Python Programming, project based

EXAM SCORES

- TOEFL iBT: will be taken on November 13, 2021
- GRE General: will be taken on November 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

References, Further information, and Proofs are available upon Request