AmirAli Kaboli | Curriculum Vitae

Amirkabir University of Technology - Department of Mathematics and Computer Science

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EDUCATION

- **Bachelor of Science** Sep 2017–Mar 2022
  Amirkabir University of Technology (Tehran Polytechnic) *Tehran-Iran*
  Ranked 2nd in Iran according to QS Ranking
  - Computer Science
    - GPA: 17.99/20 (3.87/4)
    - Thesis: Intent Detection in Conversional Recommender Systems

HONORS

- Ranked 3rd 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
- Social Media Analysis
- Multimodal Learning
- 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 using Fasttext for non-intent utterances and Bi-model with decoder for intent classes

- Research Assistant [Spring 2021-Present]
  - Under supervision of Dr. Mohammad Akbari

WORK EXPERIENCE

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

I have worked in Hezardastan Group since Oct 2019. It contains Cafe Bazaar (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.

PUBLICATIONS

- A. Kaboli, M. Akbari, "Comparative study of Intent Detection on multi-domains datasets", to be submitted, 2021 (In Preparation)

ACADEMIC PROJECTS

- 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
- Captcha Detection [Spring 2021]
  - Used a method with using PCA plus Random Forest
  - Used Convolutional Neural Networks
- 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
- 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
- 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
- Persian Language Model [Fall 2020]
  - Used N-Grams with various smoothing functions
  - Used Recurrent Neural Networks like LSTM
- 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
- Persian News Classification [Fall 2020]
  - Implemented both char-based and word-based classification

- Used TF-iDF vectorizing plus SVM

- Houzz Data Scrapper [Fall 2020]
  - Used Scrapy libarary to implement a spider over houzz.com
- 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: A^+
- Data Mining [Spring 2021]
  - Grade: A^+
- Natural Language Processing (M.Sc) [Fall 2020]
  - Grade: A^+
- Special Topics in Computer Science [Fall 2020]
  - Social Networks Analysis
  - Grade: A^+
- Information Retrieval [Spring 2020]
  - Grade: pass (pass/fail system due to COVID-19)
- Artificial Intelligence [Spring 2019]
  - Grade: 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: 88 (Reading: 24, Listening: 20, Speaking: 20, Writing: 24)
- GRE General: 306 (Quantitative: 167, Verbal: 139, Analytical Writing: 3.0)

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