Ali Tabaraei

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EDUCATION

B.Sc. in Computer Engineering   Sep. 2016 – Sep. 2020
Sadjad University of Technology   *Mashhad, Iran*

- **CGPA:** 17.85/20 (3.64/4)
- **Last-two-year GPA:** 19.21/20 (3.96/4)
- **Thesis Title:** Implementing a classifier to recommend top 5 products in a recommender system
- **Thesis Grade:** 19/20 (4/4)
- **Thesis Description:** Used Matrix-Factorization Model-Based Collaborative-Filtering approach on *MovieLens 20M dataset* to implement a recommender system which recommends top 5 movies for every single user, Under the supervision of *Dr. Javad Hamidzadeh*

AWARDS AND HONORS

- **Ranked 2nd GPA** among the graduating class of 168 students at the end of Bachelor's, *Computer and Information Technology Department, Sadjad University of Technology, Mashhad, Iran*, 2020
- **Reached final stage** of the 25th **National Computer Olympiad** in Iran (the final competition was not held due to COVID-19 pandemic), *Mashhad, Iran*, 2020
- **Ranked 39th** in **FUM Collegiate Programming Contest (FCPC 2019)** among more than 500 nationwide teams, *Ferdowsi University of Mashhad, Mashhad, Iran*, 2019
- Ranked within the **top 6%** among approximately **160,000 participants** in the **Iranian University Entrance Exam** for Bachelor's degree in Computer Engineering, *Mashhad, Iran*, 2016

RESEARCH INTERESTS

- Machine Learning
- Deep Learning
- Soft Computing
- Recommender Systems
- Big Data Analytics

SELECTED COURSES AND GRADES

- **Artificial Intelligence**, *Dr. Reza Shamsaee*, 20/20 (4/4)
- **Computational Intelligence**, *Dr. Amir Farid Aminian Modarres*, 20/20 (4/4)
- **Multimedia Systems**, *Dr. Boshra Rajaei and Dr. Behzad Bakhtiari*, 20/20 (4/4)
- **Data Mining**, *Dr. Javad Hamidzadeh*, 20/20 (4/4)
- **Computer Vision**, *Dr. Amir Farid Aminian Modarres*, 19.85/20 (4/4)

Academic Projects

Internet of Things course | *C, Python, Django, Flutter* [GitHub]
- Designed and developed an intelligent system to monitor and control a remote greenhouse
- Track and control hardware via mobile application, Telegram bot, and text message (SMS)

Computational Intelligence course | *MATLAB, Python* [GitHub]
- Developed several neural network algorithms, including Genetic, MLP, Adaline, and Perceptron

Multimedia Systems course | *MATLAB* [GitHub]
- Implemented a speech recognition application in MATLAB to recognize "Hi" from "Bye" with supervised learning using SVM classifier
- Used MATLAB app designer to create an application with user interface

Web course | *ASP.NET MVC5, HTML, CSS, JavaScript* [GitHub]
- Developed a website with authentication and authorization methods, email service, input validation, security control, database management, and CRUD operations in the admin panel

Industry Experience

- **Data Mining and Machine Learning Engineer**   June 2020 – Present
  Khorasan Science and Technology Park [website]   *Full-Time*

    - Gained experience with the most popular Date Science libraries in Python, such as NumPy, Pandas, Scikit-Learn, TensorFlow, Matplotlib, Seaborn, and many more, to manipulate and analyze the data, preprocess and visualize the data, train and test the models, and deploy them
    - Used Python Flask framework to implement web-service API's and run the project on docker container
    - Developed Python scripts to automate installation and execution of some projects as a Windows service or Linux daemon
    - Handled SQL queries from Python on different RDBM's, such as MySQL, SQL-Server and SQLite
    - Managed requests and queries with Postman and Insomnia applications
    - Used GitLab for version control and team collaboration

- **Flutter Developer**   Feb 2020 – Aug 2020
  Arashweb LLC. [website]   *Internship*

    - Developed an application in the field of literature and Iranian poets from scratch
    - Used the cutting edge JWT token-based authentication techniques
    - Used the BloC design pattern as a state management library to separate presentation from business logic, facilitating testability and reusability
    - Implemented exception handling techniques to provide a reliable service under unexpectable circumstances
    - Managed and tracked tasks with Trello

- **Flutter Developer**   Jul 2019 – Sep 2019
  White Designers Studio [website]   *Internship*

    - Developed an application in the field of health and wellness
    - Offered a better user interface plan for new application to the team
    - Experienced my first programming team work

Teaching Experience

- **Teaching Assistant**   Sep 2017 – Jan 2020
  Sadjad University of Technology, Mashhad, Iran   *Part-Time*

  (Tutored and guided over 350 students for a total of approximately 160 hours)
    - Artificial Intelligence, under supervision of Dr. Reza Shamsaee (2 separate classes)
    - Algorithm Design, under supervision of Dr. Javad Hamidzadeh (2 separate classes)
    - Algorithm Design, under supervision of Dr. Mahdi Salkhorde Haghighi (1 class)
    - Discrete Mathematics, under supervision of Dr. Saeed Yazdanian (2 separate classes)

- **Course Instructor**   May 2020 – Jul 2020
  Mobile Application Development with Flutter [YouTube]   *Part-Time*

Leadership Experience

- **Head of paper layout team** at executive committee in the 6th Conference on *Signal Processing and Intelligent Systems (ICSPIS 2020), Sadjad University of Technology,* 2020 [website]
- **Executive team leader** at 5th *Sadjad I/O event, Sadjad University of Technology,* 2018

Seminar and Workshops

Workshop Participation

- **Deep Learning for Image Processing**, *6th Conference on Signal Processing and Intelligent Systems (ICSPIS 2020), Sadjad University of Technology,* one-day online workshop, 2020
- **Principles of writing a scientific paper**, *Dentistry Department of Ferdowsi University of Mashhad,* two-week online workshop, 2020
- **Mobile Application Development with React-Native**, *Scientific Society of Sadjad University of Technology,* two-week workshop, 2018

Course Presentation

- **Computer Vision course:** Presented a paper called *"A computer vision system for defect discrimination and grading in tomatoes using machine learning and image processing"*, 2020
- **Internet of Things course:** A presentation was given on *"what is API and how to connect a mobile application to embedded hardware core"*, 2020
- **Seminar course:** A presentation was given on *"React-Native vs. Flutter framework for mobile application development"*, 2019

Certificates

- **Introduction to Machine Learning** by *Duke University* on *Coursera*
  Certificate earned on April 28, 2021 [credential]
- **Mathematics for Machine Learning** by *Imperial College London* on *Coursera*
  Certificate earned on November 29, 2020 [credential]
- **Statistics with Python** by *University of Michigan* on *Coursera*
  Certificate earned on November 19, 2020 [credential]
- **Python for Everybody** by *University of Michigan* on *Coursera*
  Certificate earned on October 7, 2020 [credential]

Technical Skills

Programming Languages:

Python MATLAB Dart C++ JavaScript C# SQL

Data Science Libraries:

NumPy Pandas Scikit-Learn Matplotlib Seaborn Streamlit

Markup Languages:

LaTeX HTML XML Markdown

Web and Application Frameworks:

Flask Flutter ASP .NET

Softwares and Tools:

Anaconda Jupyter Notebook Visual Studio Arduino Navicat Postman Git Docker

Volunteer Work

- Member of *Sadjad I/O* Student Group (student group to hold scientific events and conferences with the help of university faculty members), *Sadjad University of Technology*, 2017 – 2019

- Member of *Baran* Charity Student Group (student group to help homeless children with educational programs), *Sadjad University of Technology*, 2016 – 2018 [website]

- Member of *MehrYaran* Charity Group (a charity group to support older people and people with disabilities), *private group*, 2016 – 2017

Language

- **English:** Professional Working Proficiency
  - IELTS Academic Will be taken on August 1, 2021
  - GRE General Will be taken on November 1, 2021

- **French:** Elementary Proficiency

- **Persian:** Native Proficiency

References

- *Dr. Javad Hamidzadeh*, Associate Professor at Computer and Information Technology Department
  Sadjad University of Technology, Mashhad, Iran
  Email: J_hamidzadeh@sadjad.ac.ir

- *Dr. Reza Shamsaee*, Assistant Professor at Computer and Information Technology Department
  Sadjad University of Technology, Mashhad, Iran
  Email: r_shamsaee@sadjad.ac.ir

- *Dr. Behzad Bakhtiari*, Assistant Professor at Computer and Information Technology Department
  Sadjad University of Technology, Mashhad, Iran
  Email: bakhtiari@sadjad.ac.ir