

# Ali Tabaraei

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## EDUCATION

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### B.Sc. in Computer Engineering

*Sadjad University of Technology*

Sep. 2016 – Sep. 2020

*Mashhad, Iran*

- **Last-two-year GPA:** 19.32/20 (3.96/4)
- **CGPA:** 17.85/20 (3.64/4)
- **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

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- **Ranked 2<sup>nd</sup> 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 25<sup>th</sup> **National Computer Olympiad** in Iran (the final competition was not held due to the COVID-19 pandemic), *Mashhad, Iran, 2020*
- **Ranked 39<sup>th</sup> 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

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

## SELECTED COURSES AND GRADES

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- **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

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### 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)

### 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

### Computational Intelligence course | MATLAB, Python [\[GitHub\]](#)

- Developed several neural network algorithms, including Genetic, MLP, Adaline, and Perceptron

### 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

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### • Data Mining and Machine Learning Engineer

Feb 2021 – Present

Khorasan Science and Technology Park [\[website\]](#)

Full-Time

- Gained experience with the most popular Data 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

Jan 2020 – Sep 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 unexpected circumstances
- Managed and tracked the 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

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### • Teaching Assistant

Sep 2017 – Jan 2020

Sadjad University of Technology, Mashhad, Iran

Part-Time

(Tutored and guided over 400 students for a total of approximately 170 hours)

- Artificial Intelligence, under the supervision of Dr. Reza Shamsaee (2 separate classes)
- Algorithm Design, under the supervision of Dr. Javad Hamidzadeh (2 separate classes)
- Algorithm Design, under the supervision of Dr. Mahdi Salkhorde Haghighi (1 class)
- Discrete Mathematics, under the supervision of Dr. Saeed Yazdani (2 separate classes)

### • Course Instructor

May 2020 – Jul 2020

Mobile Application Development with Flutter [\[YouTube\]](#)

Part-Time

## LEADERSHIP EXPERIENCE

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

## SEMINAR AND WORKSHOPS

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### Workshop Participation

- **Deep Learning for Image Processing**, 6<sup>th</sup> 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

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- **Machine Learning in Python with Scikit-Learn** by Inria on France Université Numérique MOOC Platform Certificate earned on June 15, 2021 [\[credential\]](#)
- **Machine Learning** by Stanford University on Coursera Certificate earned on May 30, 2021 [\[credential\]](#)
- **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 [\[credential\]](#)

## TECHNICAL SKILLS

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### Programming Languages:

Python MATLAB Dart C++ SQL

### Data Science Libraries:

NumPy Pandas Scikit-Learn Matplotlib Seaborn Streamlit

### Markup Languages:

LaTeX HTML Markdown

### Web and Application Frameworks:

Flask Flutter ASP .NET

### Softwares and Tools:

Anaconda Jupyter Notebook Visual Studio Arduino Postman Git Docker

## VOLUNTEER WORK

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- 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

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- **English:** Professional Working Proficiency
  - IELTS Academic Will be taken on October 30, 2021
- **French:** Elementary Proficiency
- **Persian:** Native Proficiency

## REFERENCES

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- *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*  
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