

# 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*

- 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

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- **Ranked 2nd GPA among the graduating class at the end of Bachelor's** Sep. 2020  
*Sadjad University of Technology* *Mashhad, Iran*
- Ranked 2nd GPA among the graduating class at the end of Bachelor's, 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, 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, Iran, Mashhad, 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 Shamsaei, 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: Designed and developed an intelligent system for monitoring and controlling a remote greenhouse with a mobile application [project]
- Computational Intelligence course: Developed several Neural network algorithms, including Genetic, MLP, Adaline, and Perceptron [project1] [project2] [project3] [project4]
- Multimedia Systems course: Implemented a speech recognition application in MATLAB to recognize "Hi" from "Bye" with supervised learning using SVM classifier [project]
- Web course: Developed a website using ASP.NET MVC5 with authentication and authorization methods, email service, input validation, security control, database management, and CRUD operations in the admin panel [project]
- Mobile Device Programming course: Implemented a phonebook application to manage contacts and calls with React-Native framework (JavaScript)
- Information Security course: Implemented RSA algorithm with Python [project]
- Discrete Mathematics course: Programmed a C++ console application on graph algorithms including Dijkstra, BFS, DFS, Kruskal, Prim, and Floyd-Warshall [project]

## PROJECTS

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### Gitlytics | *Python, Flask, React, PostgreSQL, Docker*

June 2020 – Present

- Developed a full-stack web application using with Flask serving a REST API with React as the frontend
- Implemented GitHub OAuth to get data from user's repositories
- Visualized GitHub data to show collaboration
- Used Celery and Redis for asynchronous tasks

### Simple Paintball | *Spigot API, Java, Maven, TravisCI, Git*

May 2018 – May 2020

- Developed a Minecraft server plugin to entertain kids during free time for a previous job
- Published plugin to websites gaining 2K+ downloads and an average 4.5/5-star review
- Implemented continuous delivery using TravisCI to build the plugin upon new a release
- Collaborated with Minecraft server administrators to suggest features and get feedback about the plugin

## EXPERIENCE

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### Undergraduate Research Assistant

June 2020 – Present

*Texas A&M University*, College Station, TX

- Developed a REST API using FastAPI and PostgreSQL to store data from learning management systems
- Developed a full-stack web application using Flask, React, PostgreSQL and Docker to analyze GitHub data
- Explored ways to visualize GitHub collaboration in a classroom setting

### Information Technology Support Specialist

Sep. 2018 – Present

*Southwestern University*

Georgetown, TX

- Communicate with managers to set up campus computers used on campus
- Assess and troubleshoot computer problems brought by students, faculty and staff
- Maintain upkeep of computers, classroom equipment, and 200 printers across campus

### Artificial Intelligence Research Assistant

May 2019 – July 2019

*Southwestern University*

Georgetown, TX

- Explored methods to generate video game dungeons based off of *The Legend of Zelda*
- Developed a game in Java to test the generated dungeons
- Contributed 50K+ lines of code to an established codebase via Git
- Conducted a human subject study to determine which video game dungeon generation technique is enjoyable
- Wrote an 8-page paper and gave multiple presentations on-campus
- Presented virtually to the World Conference on Computational Intelligence

## TECHNICAL SKILLS

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**Languages:** Java, Python, C/C++, SQL (Postgres), JavaScript, HTML/CSS, R

**Frameworks:** React, Node.js, Flask, JUnit, WordPress, Material-UI, FastAPI

**Developer Tools:** Git, Docker, TravisCI, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse

**Libraries:** pandas, NumPy, Matplotlib