Amir Pourmand

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Research Interests

◇ Deep Learning	◇ Computer Vision	◇ Natural Language Processing	◇ Reinforcement Learning

Education

Sharif University of Technology   **Sep. 2020 - Present**
Master of Science in Artificial Intelligence and Robotics   *Tehran, Iran*

- ◇ GPA: **18.7/20** or 4/4
- ◇ Relevant courses (GPA: 19.25/20): Machine Learning (19.5/20), Statistical Machine Learning (19/20)
- ◇ Master's Project

   - ◇ Project Supervisor: Prof. Hamid R. Rabiee
   - ◇ Project Title: Real-time automatic Polyp detection and classification using explainable artificial intelligence
   - ◇ Project Summary: We want to localize and classify polyps within an object. However, as doctors have to do a biopsy, some pixels should be highlighted which is the requirement of being interpretable. Hence, we are building interpretable real-time YOLO (combined project with the Tehran University of Medical Sciences).

Yazd University   **Sep. 2016 - Sep. 2020**
Bachelor of Science in Computer Engineering   *Yazd, Iran*

- ◇ GPA: **17.47/20** or 3.66/4 , Units: 140
- ◇ Relevant courses (GPA: **19.95/20**): Intelligence and Expert systems (19.7/20), Foundations of Information Retrieval and Web Search (20/20), Fundamentals of Information Technology (20/20), Microprocessors and Assembly Language (20/20), Principles of Database Design (20/20), Internet Engineering (20/20)
- ◇ Bachelor's Project

   - ◇ Project Supervisor: Prof. V. Derhami
   - ◇ Project Title: A Recommendation System for shopping centers using Apriori Algorithm
   - ◇ Project Summary: The data was extracted from SQL-Server database and used to determine frequent itemsets and their metrics such as confidence and lift; then, It was used to recommend some goods to customers.

Malek Sabet High School   **Sep 2012 - June. 2016**
Diploma in Physics and Mathematics Discipline   *Yazd, Iran*
GPA: **19.49**/20, Units: 102, Affiliation: Governmental leading high school

Honors and Awards

- ◇ Awarded a grant by **National Elite Foundation** for two semesters (1 year), October 2021.
- ◇ Ranked **1st** among over 16,000 graduate applicants in the Iranian National University Entrance Exam for M.Sc. of Computer Engineering **in 7 (all CE) majors**, August 2020 (This rank is **unprecedented** in history of CE University entrance exam). [Certificate]
- ◇ **Silver Medal** in the 25th Scientific Olympiads for Iranian University Students in February 2021. [Link to Olympiad website]
- ◇ Ranked **1st** in the 24th Scientific Olympiads for Iranian University Students in Region 6 and Ranked **16th** in the country in 2019. [Link to Olympiad website]
- ◇ Offered admission to M.Sc. program in Artificial Intelligence at Yazd University as talented undergraduate student, August 2020.
- ◇ Ranked among top 1 percent in the Iranian National University Entrance Exam (1896th among over 300,000 participants), June 2016.

Under Prepration papers

Predicting who will benefit from ETV in pediatric population with hydrocephalus   **Jan 2021 - Present**
Sharif University of Technology, Shiraz University of Medical Sciences   *Supervisor: Prof. Hamid R. Rabiee*

Description: Prediction of ETV-Success in children using explainable AI (XAI).

Academic Projects

Deep Learning   **Aug 2021 - Jan 2022**
Sharif University of Technology, https://github.com/pourmand1376/DL-Homeworks   *Supervisor: Prof. Hamid Beigy*

Stochastic Process   **Aug 2021 - Jan 2022**
Sharif University of Technology, https://github.com/pourmand1376/SP-Homeworks   *Supervisor: Prof. Hamid R. Rabiee*

Machine Learning   **Jan 2021 - July 2021**
Sharif University of Technology, https://github.com/pourmand1376/ML-projects   *Supervisor: Dr. M. Rohban*

Statistical Machine Learning   **Jan 2021 - July 2021**
Sharif University of Technology, https://github.com/pourmand1376/SML-projects   *Supervisor: Prof. Rabiee*

Digital Image Processing   **Jan 2021 - July 2021**
Sharif University of Technology, https://github.com/pourmand1376/DIP-projects   *Supervisor: Prof. Kasaei*

Compiler and Parser   **December 2019**
Yazd University, https://github.com/pourmand1376/Parser   *Supervisor: Dr. ZarePour*

Description: Implementation of LL(0), LR(0), SLR(1), CLR(1) algorithms in C# from scratch.

Web Crawler, Indexer and Search Engine Web Application   **November 2018**
Yazd University, https://github.com/pourmand1376/Crawler   *Supervisor: Dr. A. Zareh*

Description: Web Crawler fetches all sites from the seeds and crawls all other related links. Indexer makes it easy to search from search engine web application written in ASP.NET MVC.

Industrial Projects

Heart Rate Monitor Application (ECG)   **July 2019 - Sep 2019**
Yazd University   *Supervisor: Prof. V. Derhami*

Description: An Android app to monitor heart rate and draw its graph in realtime.

Web application to manage invoice and account   **January 2019 – March 2019**
Amapardazesh Sepand Inc., Tavoni Etebar Kargaran Bafgh (Samen)   *Supervisor: S. Tavakoli*

Description: ASP.NET web application to manage invoice for customers, also providing a RESTful API for Android client.

Car Management for IranKhodro   **July 2013 – November 2013**
Amapardazesh Sepand Inc., IranKhodro Yazd (4022 Branch - Farashahi)   *Supervisor: S. Tavakoli*

Description: Win-Forms application to manage parking lots and control the entrance and exit of vehicles, also providing management reports.

Open Source Contributions

Translating ShareX to Persian   **July 2019 – August 2019**
Link to repo: https://github.com/pourmand1376/ShareX   *Supervisor (Maintainer): Jaex*

Internships

Web and android application for restaurant   **July 2018 – October 2018**
Amapardazesh Sepand Inc.   *Supervisor: S. Tavakoli*

Description: RESTful API for Android client written in ASP.NET. Currently, it is **widely used** in Yazd restaurants.

Teaching Experiences

Stochastic Processes for Bioinformatics   **Jan 2022 - Present**
Sharif University of Technology   *Supervisor: Dr. Mohammad H. Rohban*

Linear Algebra   **Aug 2021 - Jan 2022**
Sharif University of Techonlogy   *Supervisor: Prof. Hamid R. Rabiee*

Operating Systems Laboratory   **Aug 2021 - Jan 2022**
Sharif University of Techonlogy, https://github.com/Sharif-OS-Lab   *Supervisor: Dr. Beigy*

Principles of Information Technology Strategic Management and Planning   **January 2019 – July 2019**
Yazd University   *Supervisor: Dr. M. Matinkhah*

Fundamentals of Information Technology   **September 2018 – January 2019**
Yazd University   *Supervisor: Dr. M. Matinkhah*

Programming Fundamentals   **January 2018 –July 2018**
Yazd University   *Supervisor: Dr. R. SheykhPour*

Work Experiences

Software Developer   **July 2016 – January 2020**
Amapardazesh Sepand Inc., http://www.amapardazesh.com/   *Supervisor: S. Tavakoli*

Description: I worked four years for Sepand Inc. in different projects. Some of the projects I worked on:

- ◇ Query Optimization in SQL-Server
- ◇ Automatic updating of application using GoogleDrive API
- ◇ Report generator for DataGridView in StimulSoft Report
- ◇ Integrating different devices (POS, Scale, SMS, TelegramBot) with Sepand Application
- ◇ Database Schema Comparer and Upgrader using DACPAC

English Teacher   **July 2017 – January 2018**
Zaban Gostar Institute   *Supervisor: F. Fatemi*

Description: Teaching English to pre-intermediate students for one semester.

Technical Skills

Programming Languages: Proficient: C#, Python, SQL (T-SQL); Intermediate: Java, MATLAB
Developer Tools: VS Code, Jupyter Notebooks, Visual Studio, Android Studio
Databases: Proficient in SQL-Server
Tools: LaTeX, Git, Docker, Jekyll
Operating Systems: Manjaro (Arch Linux), Kubuntu (Debian), Windows

Languages

English: TOEFL: 103 (R: 27, L: 26, S:24, W:26) (Equivalent to C1)
          ILI Certificate (Equivalent to C2)
Persian: Native
Arabic: Basic

Extracurricular

Sports: Mountain climbing, biking, swimming, playing chess!
Other activities: Blogging

References

Prof. Hamid R. Rabiee   rabiee@sharif.edu
Professor of Computer Engineering Department, http://sharif.edu/~rabiee/   *Sharif University of Technology*

Prof. Vali Derhami   vderhami@yazd.ac.ir
Professor of Computer Engineering Department, https://pws.yazd.ac.ir/derhami/en/   *Yazd University*

Dr. Mojtaba Matinkhah   matinkhah@yazd.ac.ir
Assistant professor of Computer Engineering Department, https://pws.yazd.ac.ir/matinkhah/   *Yazd University*

Dr. Jamal ZarePour   zarepourjamal@yazd.ac.ir
Assistant professor of Computer Science Department, https://pws.yazd.ac.ir/jzarepour/   *Yazd University*