# Amir Pourmand

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## About Me

As a Machine Learning Engineer, I can help businesses incorporate AI into their business.

## Work Experiences

**Machine Learning Engineer**                                    **Jun 2023 – Present**
*Mofid Securities*

Description: In my role, I transformed AI concepts into practical products. For instance:

◇ Developed a trading assistant using OpenAI's ChatGPT for improved customer support in finance
◇ Created MofidGPT, a smart Q&A tool, to swiftly address customer queries
◇ Utilized ASR systems to transcribe video content, extracting key information and summarizing it effectively
◇ Served some Open-source projects in production such as PyAnnote Diarization and Whisper for local usage

**Deep Learning Researcher**                                    **Jan 2021 – Jun 2023**
*Data Science and Machine Learning Lab, Sharif University of Technology*          *Supervisor: Hamid R. Rabiee*

◇ Real-time Automatic Polyp detection and classification using Interpretable AI (XAI): The purpose of this work is to enhance the YOLO algorithm's performance in handling labeled and unlabeled data using a semi-supervised learning framework. The study proposes an innovative approach that integrates semi-supervised learning and interpretability to improve the performance and transparency of the YOLO algorithm. To achieve this, pseudo-labeling is employed for semi-supervised learning, and the PyTorch-GradCAM library is adapted to work with YOLOv5, making it interpretable.

◇ Real-time Detection of Brain Aneurysms using Multi-View YOLOv5: Our project involved customizing the YOLOv5 algorithm to detect brain aneurysms in 2.5D CT scans. The network structure was modified to accept multiple images of the same patient as a single input, which helped the network to make better use of available information.

**Software Developer - Full-Stack Web Developer**                **July 2016 – January 2020**
*Amapardazesh Sepand Inc.*                                        *Supervisor: S. Tavakoli*

Description: The projects I worked on during my four years with Sepand Inc. were as follows:

◇ 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

## Technical Skills

**Programming Languages**: Proficient: Python, C#, SQL (T-SQL); Intermediate: Java, MATLAB
**Data Science Libraries**: PyTorch, Pandas, Numpy, OpenCV, scikit-learn, Matplotlib, Scrapy
**Developer Tools**: VS Code, Jupyter Notebooks , VIM, Visual Studio, Android Studio
**Databases**: Proficient in SQL-Server, Familiarity with Mongo-Db
**Tools**: Git, Docker, Jekyll, Hugo, LaTeX,
**Operating Systems**: Manjaro (Arch Linux), Kubuntu (Debian), Fedora (KDE spin), Windows

## Education

**Sharif University of Technology**                              **Sep. 2020 - Present**
*Master of Science in Artificial Intelligence and Robotics*      *Tehran, Iran*
◇ GPA: 18.83/20
◇ Relevant courses: Deep Learning, Natural Language Processing, Computer Vision, Machine Learning

**Yazd University**                                             **Sep. 2016 - Sep. 2020**
*Bachelor of Science in Computer Engineering*                    *Yazd, Iran*
◇ GPA: 17.47/20
◇ Relevant courses: Intelligent and Expert Systems, Algorithms and Data Structures, Principles of Database Design, Foundations of Information Retrieval and Web Search

## Internships

**Web Application and RESTful API for Restaurant**                July 2018 – October 2018
*Amapardazesh Sepand Inc.*                                          *Supervisor: S. Tavakoli*

Description: As well as developing a RESTful API service for Android devices, I built a dashboard (based on ASP.NET) for managers to customize the restaurant according to their preferences.

## Industrial Projects

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

Description:The app receives real-time data from a wireless ECG device via Bluetooth and displays it as a graph. However, some of the data was distorted or lost, making it difficult to consistently display it.

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

Description: This web application provides a RESTful API for Android clients and an ASP.NET web application to show customers how much they owe the company.

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

Description: My first encounter with any programming language was with this Windows-forms application that managed parking lots, controlled vehicle entrance and exit, and generated management reports.

## Open Source Contributions

**Maintainer of al-folio Jekyll Theme**                                         June 2022
*Link to repo: [https://github.com/alshedivat/al-folio](https://github.com/alshedivat/al-folio)*        *Owner: Al-Shedivat*

**Contributions to YOLOv5**                                                         2022
*Link to repo: [https://github.com/ultralytics/yolov5, #9059, #8694, #8766](https://github.com/ultralytics/yolov5)*        *Maintainer: Glenn Jocher*

**Open source Crawler for Persian websites**                                   July 2022
*Link to repo: [https://github.com/pourmand1376/PersianCrawler](https://github.com/pourmand1376/PersianCrawler)*        *Maintainer: Me*