Melbourne, Australia

ARYA ARABAN

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EMPLOYMENT

Backend Web Developer   **Pasavan Co.**   **July 2019 – April 2020**

Recruited as a backend developer following a couple of weeks of interning for this company.
Primarily utilized Laravel (a PHP framework, which is based on MVC).
- Created various websites such as an energy resources website, and a forum website.
- Occasionally tasked in assisting the deployment of APIs or working on the frontend of websites.

January 2019 – January 2020
Teaching Assistant   **Ferdowsi University of Mashhad**   **September 2022 – January 2023**

TA of the Logical Circuits course and the masters level Introduction to Computer Vision course at Ferdowsi Uni.
Taught students and solved their course-related problems on a weekly basis.
- Computer Vision: would prepare code prior to each class and explain the code and its results to the students.
- Logical Circuits: was assigned as head TA of the course which required grading students based on the effort they put into the coursework, as well as supervising the work of other TA's.

Computer Vision Leader   **FUM Robotics & Computer lab**   **April 2021 – November 2021**

Leader of the Vision section of a large-scale project involved in creating a real-life ping-pong playing robot.
- Achieved many of the vision tasks that were required for the project by using MATLAB. These include tracking the ping-pong ball, obtaining the speed of the ping-pong ball, plotting the trajectory of the ball.
- Supervised and guided students who were working in the vision field of this project.

Data Scientist, Intern   **Wise Intelligent Agents Co.**   **July 2021 – September 2021**

The main focus of this internship was on NLP.
- Assisted in the implementation of a query graph generator for answering complex questions in a Persian knowledge base called Farsbase.
- Given a large dataset (>13GB) of Persian news articles, cleansed the data at hand and visualized the data in various manners in order to gather useful information from it.
- Implemented unsupervised learning on the collection of sentences in the news articles by initially tokenizing the sentences using three different text tokenization algorithms, and then applying K-Means.

EDUCATION

- **BSE in Computer Engineering, Ferdowsi University of Mashhad**, September 2017 – January 2022, GPA: 3.4/4, GPA of last two years: 3.73/4
- **MS in Computer Science (AI focused), University of Melbourne**, February 2023 – present (ongoing)
- **Related University Coursework**: Artificial Intelligence (3.5/4); Computational Intelligence (4/4); Computer Vision (3.5/4); Evolutionary Computation (3.3/4); Databases (3.8/4); Data Mining (3.84/4); Operating Systems (4/4); Compiler Design (4/4); Video Game Design (2.8/4); Software Testing (3.5/4); Micro Economics (4/4);
- **Related Courses completed outside of university**: Machine Learning by Andrew NG (Coursera); Deep Learning Specialization by Andrew NG (Coursera); PHP with Laravel by Edwin Diaz (Udemy); Blockchain and Money by Gary Gensler (MIT OCW)

TECHNICAL EXPERIENCE

Projects
- **Flappy Bird NeuroEvolution** (2020). Created an AI which masters Flappy Bird after a few minutes of training. Achieved by mixing the genetics algorithm with feedforward neural networks
- **Predicting Movie Genres** (2021). Engineered and trained ML classifiers which predict movie genres based on the movie's overview. Achieved by extracting features for each of the overviews using NLP algorithms

- **Unsupervised Learning using Neural Networks** (2021). Researched on how neural networks can be used for clustering data, and then demonstrated a suggested method with code. Self-Organizing Maps (AKA Kohonen Maps) were used for this project.

* All of the mentioned projects (and many others) are available on Github

Languages and Technologies

Python; C; Java; C#; PHP; SQL; JavaScript; MATLAB; Dart; Git;
Tensorflow; Keras; Pandas; Numpy; Matplotlib; Unity; Laravel; HTML/CSS; SPARQL; Flutter