

ZAHRA PARHAM

Curriculum vitae last updated on September 15, 2020
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RESEARCH INTERESTS

- Reinforcement Learning
- Deep Learning
- Human Computer Interaction
- Applications of Optimization
- Linear Algebra
- Cognitive science

EDUCATION

Bachelor of Science in Computer Science 2015-2019
Amirkabir University of Technology(Tehran Polytechnic), Tehran, Iran
CGPA: 3.55/4
Selected Courses ¹

RESEARCH EXPERIENCE

Multi-Agent Deep Reinforcement Learning 2019-2020
BSc Project, Supervisor: Dr. Akbari

- solved pursuit-evasion problem with multi-agent deep reinforcement learning

RoboCup Rescue Virtual League Fall 2018
Team SOS CS, Supervisor: Dr. Shiry Ghidary

- The main objective was to prevent the robot from getting stuck next to the walls while crossing.
- We benefited Gazebo for 3D simulation. As for developing the robot and its model, we utilized ROS and P3AT

TEACHING EXPERIENCE

TA, Software Engineering Winter 2020
Instructor: Dr.Amin Gheibi

TA, Fundamentals of Numerical Analysis Fall 2019
Instructor: Dr.Fatemeh Shakeri

TA, Introduction to The theory of Computation Winter 2019
Instructor: Dr.Naser Hashemi

WORK EXPERIENCE

Data Developer May 2019 - Present
Snapp Company

- Wrote SQL queries to aggregate data
- Performed business analysis and wrote SQL scripts to analyze data and parse to Excel.
- Generated ad-hoc to provide visible data for data analysts and business using SSRS and Power Bi

¹ Introduction to Computer and Programming : A; Statistics and Probability 1 : A ; Foundation of Matrix and Linear Algebra : A; Foundation of Combinatorics : A⁺ Linear Optimization : A Foundation of Numerical Analysis : A⁺ Database : A⁺ Principles of Computer Systems : A⁺ Computer Networks : A⁺ Compiler : A⁺ Principles of Operating Systems : A⁺ Numerical Linear Algebra : A⁺ Numerical Methods for Linear Algebra(Master Course) : A⁻

- Developed ETL pipeline in python
- Developed Clickhouse Data Pipeline for Real Time Analysis and Reporting
- Developed Powerbi/Superset/Grafana Tech Stack for Visualization and advanced reporting and dashboard analysis
- Worked on Clickhouse, MySQL, Sql Server, BigQuery

Web Developer

December 2017-May 2018

bimebazar

- The job partially consisted of modeling insurance products
- Self taught Django and React.JS to build websites

TRAININGS AND WORKSHOPS ATTENDED

Summer School in Computer Science

August 24th-27th, 2019

Tehran Institute for Advanced Studies at Khatam University

- participated in a 32-Hour Summer School in Computer Science with special theme on: Data Science and Machine Learning
- I was offered a 75% scholarship on the registration fee for the school

Workshop of Computational and Mathematical Psychology

April 21th-23th, 2020

Institute of Cognitive and Brain sciences (ICBS) of Shahid Beheshti University

- participated in the 1st Workshop of Computational and Mathematical Psychology: Deep Learning and Neural Networks

Deep Learning Specialization

June 2020

deeplearning.ai course

- certificated in Neural Networks and Deep Learning Course

Data Science Course

April 2020

365datascience

- certificated in Probability, Statistics, Mathematics, SQL, Python, Git, Deep Learning with TensorFlow and Web Scraping and API Fundamentals in Python

Data Science Math Skills

August 2020

Duke University

- learned the basic math skills for data science.

PROJECTS

Multi-Agent Deep Reinforcement Learning

2019 - 2020

BSc Project

- solved pursuit-evasion problem with multi-agent deep reinforcement learning

Deep Neural Network for Image Classification

June 2020

deeplearning.ai Course

- Built a deep network, and applied it to cat vs non-cat classification
- The first course of Deep Learning Specialization by deeplearning.ai

Rescue virtual robot

Fall 2018

Computer Science Robotics Lab

- The main objective was to prevent the robot from getting stuck next to the walls while crossing.
- We benefited Gazebo for 3D simulation. As for developing the robot and its model, we utilized ROS and P3AT respectively.

Linear Algebra Project

Jan 2019 - July 2019

Numerical Methods for Linear Algebra(Master Course)

- solved a tridiagonal Toeplitz and block-Toeplitz matrix with Jacobi and Gauss-Seidel and SOR methods.
- Investigated the convergence of several iterative methods

Data Mining Contest

July 2019

Amirkabir Data Mining Cup 2018

- Predict plane ticket prices using Linear Regression.

Created a website for a company

Sep 2018

Freelance Project

- My first ReactJS website for my freelance client.

Birthapp: An application that helps you buy birthday gifts

Jan 2018 - July 2018

Software Engineering Course Project

- This project is a platform on which people can follow each other while proposing a list of their most desired birthday gifts.
- The application was Developed using Scrum Methodology for Agile Software Development.
- The coursework required 5 presentations throughout the semester which included a 5-minute startup pitch presentation and the presentation of the first MVP(Minimum Viable Product).

Multi threading programming

Jan 2019 - July 2019

Principles of Operating Systems Course Project

- Determined the validity of a sudoku solution using multi threading in Java
- Implemented merge sort with multi threading in Java

Simulation of a tourist guide application

Jan 2017 - July 2017

Advanced Programming Course Project

- object oriented java coding

HONORS AND AWARDS

4th Place - RoboCup Asia-Pacific 2018

winter 2018

Math and Computer Science Faculty

- Field: Rescue Simulation Virtual Robot
- Team: SOS CS Team

Ranked Within the Top 1% (among 300,000 students) in Iranian University Entrance Exam

Jul 2015

Tehran, Iran

- The competition is intense since it is the only means to gain admission to universities.

SKILLS

| | |
|------------------------------|---|
| Programming Languages | C/C++, Python, Java, Matlab |
| Web Technologies | HTML, CSS, Javascript, MySQL, SQL Server, Django, Reactjs |
| Libraries | numPy, Pandas, TensorFlow, Scikit-Learn, Keras, Matplotlib |
| Robotics | Robot Operating System(ROS), Gazebo |
| Operating Systems | Linux, Windows |
| Languages | Persian, English(TOEFL iBT test date: November 14th) |
| Miscellaneous | L ^A T _E X, Jupyter, Git, Microsoft Office, GAMS |

❶ References, further information, and proofs are available upon request