

Erfan Zekri Esfahani

CV

Artificial Intelligence Lab, Computer Engineering Dept.
Isfahan University of Technology, Isfahan, Iran
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Education

- 2019–2021 **M.S. in Computer Science-Artificial Intelligence and Robotics**,
Isfahan University of Technology, Isfahan, Iran.
Advisers: Dr. Maziar Palhang.
Thesis: "Working on Humanoid Robots..."
GPA: 18.06/20.
Selected Courses: Pattern Recognition (20/20), Autonomous Mobile Robots (19.61/20), Computer Vision (17.8/20), Swarm Intelligence (17.83/20), Deep Learning (17.4/20)
- 2015–2019 **B.S. in Computer Engineering-Software Engineering**, *Shahrekord University, Shahrekord, Iran.*
Adviser: Dr. Reza Rouhani.
Thesis: "Multi Kinect Sensor Fusion for Noise Reduction"
GPA: 17.53/20.
Selected Courses: Principles of Robotics (20/20), Computer Vision Fundamentals (20/20) [Class Avg.: 12.47/20], Computational Intelligence Fundamentals (19.5/20), Computer Graphics (20/20), Micro Processor (20/20) [Class Avg.:12.91/20], Operating System (20/20) [Class Avg.: 12.94/20], Computer Networks (20/20), Compiler Design Fundamentals (20/20), Formal Languages and Automata (20/20) [Class Avg.: 12/94/20], Programming Language Design (19.75/20), Signals and Systems (19/20) [Class Avg.: 11.89/20], Internet Engineering (19/20) [Class Avg.:11.67/20], Natural Language Processing (18.80/20), Database (18/20), Data Structure (18/20)
- 2011–2015 **Diploma in Mathematics and Physics**, *Shohadaye Adab High School, Isfahan, Iran.*
GPA: 18.50/20.

Research Interests

- Machine Learning
- Deep Learning
- Computer Vision
- Robotics and Humanoid Robots

Research Experience

- Nov. 2019–Now **Graduate Research Assistant at Artificial Intelligence Laboratory (AI Lab.)** *Department of Electrical and Computer Engineering, Isfahan University of Technology, Isfahan, Iran.*

Teaching Experience

- Spring 2021 **Teaching Assistant**, Autonomous Mobile Robots, *Dr. Palhang, Isfahan University of Technology, Isfahan, Iran.*
- Fall 2020 **Teaching Assistant**, Machine Learning, *Dr. Palhang, Isfahan University of Technology, Isfahan, Iran.*
- Fall 2020 **Teaching Assistant**, Introduction to Computing Systems and Programming, *Mr.Zahabi, Isfahan University of Technology, Isfahan, Iran.*
- Spring 2019 **Teaching Assistant**, Introduction to Computing Systems and Programming, *Mrs.Moradi, Shahrekord University, Shahrekord, Iran.*
- Spring 2019 **Teaching Assistant**, Formal Languages and Automata, *Mr.Mostafavi, Shahrekord University, Shahrekord, Iran.*
- Spring 2018 **Teaching Assistant**, Formal Languages and Automata, *Mr.Mostafavi, Shahrekord University, Shahrekord, Iran.*
- Fall 2017 **Teaching Assistant**, Introduction to Computing Systems and Programming, *Dr.Rouhani, Shahrekord University, Shahrekord, Iran.*

Work Experience

- Jun.-Sep. 2019 **Customer Technical Support Internship**, ICAN Engineering group, Isfahan, Iran
- Support companies' networks and their SQL databases
- Jul.-Oct. 2018 **Graduation Internship**, Isfahan's Mobarakeh Steel Company, Isfahan, Iran
- Designing and developing windows application projects using C#, WPF, ADO.NET and SQL

Volunteer Experience

- Feb. 2021 **Content Contributor**, Facebook (Meta) Company, California, United States
- contribute in "react-native-website" repository of Facebook (Meta) Company, [Link To Repository](#)
- 2018-2019 **Co-Founder and Main Member of Scientific Association of Digital Games and Animation**, Shahrekord University, Shahrekord, Iran

Computer Skills

Programming Languages	<i>Expert:</i> C++, Python <i>Basic:</i> C, C#, MATLAB, Prolog, Assembly, Fortran, Java
AI Frameworks and Libraries	Tensorflow, Keras, Darknet, Scikit-learn, Gym
Web Development	ASP.NET MVC, HTML, CSS, JavaScript, Bootstrap, JQuery
Mobile Phone Development	React Native
Game Development	Unity
DBMS	Microsoft SQL Server, MongoDB
TypeSetting	Microsoft Word, L ^A T _E X

OS Windows, Linux (Ubuntu), Raspbian OS, ROS
Others Git

Projects

- Jul. 2020 **Particle Filter for Autonomous Mobile Robots**, Isfahan University of Technology, Isfahan, Iran
- Particle Filter Algorithm using Python and ROS (Noetic),
[Source Code in Github](#)
- Aug. 2019 **Sudoku Solver for Android**, Self Motivation, Isfahan, Iran
- Sudoku Solver Application using React-Native,
[Published in Cafebazzar \(Persian App Store\)](#)
- Jun. 2019 **Depth Detection with Stereo Camera**, Shahrekord University, Shahrekord, Iran
- Compute Depth of Several Spherical Objects with Two Images using MATLAB, Circle Hough Transform Algorithm, and Triangulation (Computer Vision Course Project)
- Jun. 2019 **Simulation of an Autonomous Car to Find a Specific Black Colored Square**, Shahrekord University, Shahrekord, Iran
- Compute Car Wheel Speeds and Positions (as Servo Motors) to Search Whole Area to Find a Specific Black Colored Square (Robotics Course Project)
- Jun. 2019 **Simulation of a Mechanical Arm to Move Objects**, Shahrekord University, Shahrekord, Iran
- Compute Joint Angles of a Mechanical Arm to Go to a Specific Point using Forward Kinematic (Robotics Course Project)
- Jan. 2019 **Noise Canceling for Human Voices**, Shahrekord University, Shahrekord, Iran
- Cancel Environment Noises using Low/High Pass Filter with MATLAB (Signal Processing Course Project)
- Jan. 2019 **Iris Flower Classification**, Shahrekord University, Shahrekord, Iran
- Classify Iris Flowers using Python and Scikit-learn Library (Computational Intelligence Course Project)
- Jan. 2019 **Author's Gender Classification**, Shahrekord University, Shahrekord, Iran
- Classify Author's Gender using Python and Scikit-learn Library (Natural Language Processing Course Project)
- Jun. 2019 **Weightlifting Game for Windows**, Shahrekord University, Shahrekord, Iran
- Weightlifting Game using C++ and DirectX Library (Graphics Course Project), [Source Code in Github](#)
- Jun. 2018 **Redevelopment of Cinematicket Website**, Shahrekord University, Shahrekord, Iran
- Redevelopment of Sell/Buy Cinema and Theater Tickets Website ([Cinematicket](#)) using HTML, CSS, Javascript, Json, Ajax, and Bootstrap (Internet Engineering Course Final-term Project)

- Mar. 2018 **Minesweeper Game for the Web**, Shahrekord University, Shahrekord, Iran
- Minesweeper Game using HTML, CSS, Javascript, and Bootstrap (Internet Engineering Course Mid-term Project), [Play Game Online](#)
- Dec. 2017 **Tic-Tac-Toe Game for Android**, Shahrekord University, Shahrekord, Iran
- Smart Tic-Tac-Toe Game using Unity, C#, and Minimax Algorithm (AI Course Project)
- Aug. 2017 **Simple Action and Intellectual Games for Windows**, Self Motivation, Isfahan, Iran
- Several Simple Games using Unity and C#
- Aug. 2016 **Flappy Bird Game for Windows**, Self Motivation, Isfahan, Iran
- Develop Flappy Bird Game using C++, SDL extention, and Physics Motion Formulas
- Apr. 2016 **Car Number-Plate Recognition**, Shahrekord University, Shahrekord, Iran
- Recogniton of Simple Handmade Number-Plates using C++, SDL extention, and pixel-wise processing
- Mar. 2016 **Windows Paint**, Shahrekord University, Shahrekord, Iran
- Windows Paint Application using C++ and SDL extention
- Jan. 2016 **Reserve Food System (in Terminal)**, Shahrekord University, Shahrekord, Iran
- Reserve and Consume Food Coupons in University's Dinning Salon as a simulation, [Source Code in Github](#)

Honors & Awards

- 2020 **Ranked 1st** in [Digikala](#) (Biggest Online Store in Iran) Artificial Intelligence (AI) Challenge, Isfahan University of Technology, Isfahan, Iran
- 2019 **Talented Student Award:** Qualified for graduate studies in Isfahan University of Technology, Isfahan University, and Shiraz University without entrance exam, Iran
- 2019 **Ranked 2nd** among Computer Engineering students in all 8 semesters, Shahrekord University, Shahrekord, Iran
- 2016 **Ranked 2nd** in ACM intra-university Contest, Shahrekord University, Shahrekord, Iran
- 2007 **Ranked in top 2% in the B. S. Nationwide Universities Entrance Exam**, Physics and Mathematics Diploma, Iran

Languages

- English** Professional Working Proficiency
- Persian** Native Language

Hobbies

- Swimming
- Play Badminton
- Play Soccer
- Play Video Games