Mahdi Kafi

Education

 $\boldsymbol{B.Sc.}$ of Computer Engineering (Software), K.N. Toosi University of Technology, Tehran, Iran GPA, 16.26/20

2014-2020

Selected Courses

Fundamentals of Computer Vision, 17.7/20
Fundamentals of Robotics, 17.5/20
Artificial Intelligence & Expert Systems, 19/20
Software Engineering, 19.5/20
System Analysis & Design, 18.5/20
Engineering Probability, 19/20
Signals & Systems, 17.5/20
Operating Systems, 19.3/20
Design of Programming Languages, 19.3/20
Eng Mathematics, 20/20
Electrical Circuits, 20/20
Computer Networks, 18/20
Micro Processors & Assembly Language, 20/20
Computer Structure & Language, 20/20
Research & Technial Presentation, 17.2/20

Research Interests

Bioinformatics
Computational Biology
Machine Learning
Deep Learning
Artificial Neural Networks

Honors and Awards

Ranked 40 among approximately 20,000 participants in the National Computer Engineering Master's Degree Entrance Examination form Iranian Universities, Iran 2020 Dean's List of Computer Engineering Department, K.N. Toosi University of Technology, Tehran, Iran 2018 Ranked Top 0.5~% among approximately 200,000 participants in the National Entrance Examination form Iranian Universities, Iran 2014

Selected Projects

Image Stabilization, Designed and implemented an image stabilization algorithm using optical flow which will be used in an aerial robot.

Facial Expression Recognition, Trained a Cascade Detector to detect faces from the video frame and a Convolutional Neural Network to classify the faces in 5 classes based on expression.

House Rent Prediction, Implemented a Python script to scrape the information of houses in Ontario and British Columbia, store them in a database and learn the features to predict the new houses' rent.

Page Rank, Implemented a Python script to spider a website and rank its pages then visualize the results of page ranking. Email Data Analysis, Implemented a Python script to catch over 1 gigabyte email data, clean and model them in database and find top 10 organizations which sent most emails.

Vehicle Routing, Implemented client-side of a website which is used to choose some destinations and get the most efficient route between them.

Heart Disease Detection, Developed a Rule-Based Expert System to detect heart disease based on patient's symptoms. Library Management System, Developed a graphical library management system using Java, Javafx, Oracle 12c database, and Hibernate.

Accomplished Courses

Advanced Python Programming, Jadi Mirmirani, Maktabkhooneh, certificate	Summer 2020	
Learning How to Learn: Powerful mental tools to help you master tough subjects, McMa	ster University,	
University of California San Diego, Coursera, certificate	Summer 2020	
Convolutional Neural Networks, deeplearning.ai, Coursera, certificate	Summer 2019	
Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning, deeplearn-		
ing.ai, Coursera, certificate	Summer 2019	
Structuring Machine Learning Projects, deeplearning.ai, Coursera, certificate	Summer 2019	
Hyperparameter tuning, Regularization and Optimization, deeplearning.ai, Coursera, certificate	Spring 2019	
Neural Networks and Deep Learning, deeplearning.ai, Coursera, certificate	Spring 2019	
Python for Everybody, 5-course specialization, University of Michigan, Coursera, certificate	Spring 2019	
Data Mining with Python, KNTU ACM Student Chapter, Tehran, Iran, certificate	Winter 2018	

Work Experiences

Rahbin Sanat Nasir, Intern, Implemented a Lane Departure Warning (LDW) system.

Summer 2018

Teaching Experiences

Hatef High school, Teacher, Python Programming	2019-2020
K.N. Toosi University of Technology, Teaching Assistant, Artificial Intelligence & Expert Systems	Fall 2018
K.N. Toosi University of Technology, Teaching Assistant, Artificial Intelligence & Expert Systems	Fall 2017
K.N. Toosi University of Technology, Teaching Assistant, Principles of Database Design	Spring 2017
K.N. Toosi University of Technology, Teaching Assistant, Theory of Formal Languages & Automata	Spring 2016

Extracurricular Activities

ACM Student Member	2018-Present
KNTU ACM Student Chapter, Vice President	2018-2019
KNTU Computer Engineering Student Scientific Association	2017-2019

Computer Skills

Languages	Python, Java, SQL, C/C++
${f Tools/Frameworks}$	Tensorflow, Keras, OpenCV, Flask, Kivy, Git, LATEX, Adobe Illustrator,
	Adobe Photoshop, MS Office

 ${\bf Databases} \qquad \qquad {\bf Postgre SQL}, \, {\bf MySQL}, \, {\bf Oracle 12c}, \, {\bf SQLite}$

Languages

English

IELTS 7 – LISTENING 7, READING 7, WRITING 6.5, SPEAKING 6.5

GRE – QUANTITATIVE REASONING 162, VERBAL REASONING 140