Mostafa Kermani Nia

Date of birth: 13/06/2004 | **Nationality:** Iranian | **Phone:** (+98) 9309659983 (Mobile) | **Email:** kermaninia@ut.ac.ir | **Website:** https://mostafa-kermaninia.github.io/ | **Instagram:** https://www.instagram.com/mosiyo_kerry/ | **Whatsapp Messenger:** +989309659983 | **telegram:** @mosiyo_kerry | **Address:** Tehran, Iran (Home)

ABOUT MYSELF

I am an undergraduate Computer Engineering student at the University of Tehran with a focus on academic growth and hands-on learning through impactful projects. I value collaboration and seek opportunities to contribute to meaningful research while expanding my knowledge and skills.

WORK EXPERIENCE

UNIVERSITY TEACHING ASSISTANT

Machines and Language Theory course (University of Tehran)
Sep 2024 – Current
- Under supervision of Prof. Hassan Mousavi

Probability and Statistics course (University of Tehran)
Jul 2024 – Current
- Under supervision of Prof. Abdol-Hossein Vahabie and Prof. Mostafa Tavassolipour

Computing Systems and Programming Laboratory (University of Tehran)
Sep 2023 – Current
- Under supervision of Prof. hadi moradi and Prof. Mahmoud Reza Hashemi

Fundamentals of programming course (University of Tehran)
Jan 2024 – Jul 2024
- Under supervision of Prof. Mohammad Javad Dousti

Discrete Mathematics course (University of Tehran)
Jan 2024 – Jul 2024
- Under supervision of Prof. Siamak Mohammadi

EDUCATION AND TRAINING

23/09/2022 – CURRENT Tehran, Iran
BACHELOR OF SCIENCE University of Tehran

Website https://ut.ac.ir/en | **Field of study** Computer Engineering | **Final grade** 19.76/20

01/07/2016 – 01/10/2022 Iran
DIPLOMA National Organization for Development of Exceptional Talents (NODET)

Field of study Mathematics and Physics | **Final grade** 19.90/20

HONOURS AND AWARDS

Top Student

Ranked 1st among all Computer Engineering B.Sc students in the University of Tehran who entered in 2022.

National University Entrance Exam

Being in (Top 0.6%) in Nation-wide Iranian University Entrance Exam in Mathematics and Physics

Physics Olympiad

Silver medal at Iranian National Olympiad in Physics.

COMMUNICATION AND INTERPERSONAL SKILLS

ACM student chapter

- Core Member of ACM student chapter in University of Tehran
- July 2024 – Present

PROJECTS

RF learning and LSTM (Jupyter Notebook)

- Part I: Reinforcement Learning and Deep Q Learning - Part II: Recurrent Neural Network (RNN) and Long short-term memory (LSTM) - Part III: Search Algorithms (A* search, Minimax search, DFS, BFS, UCS, CSP problem)

Link https://github.com/mostafa-kermaninia/RF-learning-and-LSTM

Quantum NNs and Unsupervised Learning (Jupyter Notebook)

- Part I: Unsupervised learning methods (K-means, Hierarchical Clustering, and DBSCAN) - Part II: Supervised learning methods (DT, RF with entropy and Gini impurity) - Part III: A Quantum Neural Network is built and trained.

Link https://github.com/mostafa-kermaninia/Quantum-Neural-Networks-and-Unsupervised-Learning

Pretrained CNNs and GAN implementation (Jupyter Notebook)

- VGG16 and ResNet50 pre-trained CNNs are used with and without data augmentation. A Deep Convolutional Generative Adversarial Network (GAN) is created for the CIFAR-10 dataset.

Link https://github.com/mostafa-kermaninia/Pretrained-CNNs-and-GAN-implementation

Deep learning model initialization schemes (Jupyter Notebook)

- Xavier Glorot and Kaiming He initialization schemes are compared.

Link https://github.com/mostafa-kermaninia/Deep-learning-model-initialization-schemes

Unsupervised learning algorithms (Jupyter Notebook)

- Implements KNN, SVM, GBoost, and XGBoost.

Link https://github.com/mostafa-kermaninia/Unsupervised-learning-algorithms

AI Optimizers and Imbalance dataset (Jupyter Notebook)

- Explains optimizers like SGD+momentum, Adagrad, and RMSprop & Implements methods for handling imbalance datasets (e.g., SMOTE).

Link https://github.com/mostafa-kermaninia/AI-Optimizers-and-Imbalance-dataset

Natural Language Processing (Python)

- Implements preliminary NLP methods.

Link https://github.com/mostafa-kermaninia/Natural_language_processing

Image recognition (Jupyter Notebook)

- Image recognition using Bayesian estimation.

Link https://github.com/mostafa-kermaninia/Image-recognition-with-bayesian-estimation

License Plate Detection (MATLAB)

- Detects numbers and letters on license plates in English and Farsi & Calculates the average speed of vehicles from video data.

Link https://github.com/mostafa-kermaninia/License-Plate-Detection

Fantasy Football Game (C++, Makefile)

Link https://github.com/mostafa-kermaninia/Fantasy-Football-Game

Mini Uber (C++, Makefile)

Link https://github.com/mostafa-kermaninia/Mini-Uber

Professional Telegram Bot (Python)

- Includes inline buttons, custom keyboards, forced channel joins, and conversation bots.

Link https://github.com/mostafa-kermaninia/professional-telegram-bot-practices-

TURTIX Game (C++, Makefile)

- Built using the SFML library.

Link https://github.com/mostafa-kermaninia/TURTIX-game

Court Piece Game (C)

- A simulation of the traditional Hokm card game.

Link https://github.com/mostafa-kermaninia/court-piece-game

DIGITAL SKILLS

Digital Skills - Test Results

Information and data literacy	**ADVANCED**	Level 6 / 6
Communication and collaboration	**ADVANCED**	Level 6 / 6
Digital content creation	**ADVANCED**	Level 6 / 6
Safety	**ADVANCED**	Level 6 / 6
Problem solving	**ADVANCED**	Level 6 / 6

Results from a self-assessment based on The Digital Competence Framework 2.1

LANGUAGE SKILLS

Mother tongue(s): **PERSIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	B2	B2	B1	B2

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user