Danial Ahangarani

Master's graduate - Machine Learning

Sharif University of Technology
Department of Computer Engineering

Homepage 🔗 / Github 🔗
daniahangaranii@gmail.com

Summary

Machine Learning Researcher | Developing AI Solutions for Scientific and Real-World Challenges

POSITIONS

Data Scientist

January 2025 – Present: ***FanavarTech*** 🔗
In my role as a Data Scientist at FanavarTech, I develop and deploy real-time video inpainting and object removal solutions for live video streams, leveraging advanced deep learning and computer vision techniques. I implement state-of-the-art inpainting frameworks to seamlessly restore backgrounds and maintain visual consistency after object removal. My responsibilities also include collaborating with cross-functional teams to integrate machine learning pipelines into production environments, ensuring robust and scalable video processing, and optimizing model performance for speed and accuracy to support real-time applications.

Research Assistant

2021 - 2024: Research Assistant at the ***RIML*** 🔗
During my master's degree, I was involved in a collaborative research project between the Robust/Interpretable ML Lab and the Organic Chemistry Lab. The project focused on applying deep learning and natural language processing techniques for the prediction of drug-target binding affinity. I contributed to the development of novel methodologies to bridge the gap between computational and experimental drug discovery approaches. I was actively engaged in interdisciplinary efforts to advance the field of pharmaceutical science through cutting-edge technologies.

Teaching Assistant

- Spring 2023: Data Structures and Algorithms at the Sharif University of Technology.
- Fall 2023: Intelligent Processing of Biomedical Images at Sharif University of Technology.

EDUCATION

- Master's degree in Computer Engineering, Sharif University of Technology. (GPA: 3.87)

- Bachelor's degree in Computer Science (Minor: Cinema-Directing), Shahid Beheshti University and Applied Science & Tech University.

HONORS & AWARDS

- 2021 Ranked 56 among more than 30,000 participants in the nationwide university entrance exam for Computer Engineering.
- 2021 Ranked 45 among over 5,000 participants in the nationwide university entrance exam for Computer Science.

PUBLICATIONS

Ahangarani, Danial, Mohammad Shirazi, and Navid Ashraf. "Investigating Deep Neural Network Architecture and Feature Extraction Designs for Sensor-based Human Activity Recognition." *2023 7th International Conference on Internet of Things and Applications (IoT)*. IEEE, 2023. **(GitHub)**

PROJECTS

Human Activity Recognition

- Investigation Deep Neural Network in Human Activity Recognition (**GitHub**)

Machine Learning

- Breast Cancer Prediction (**GitHub**)
- Estimating obesity levels based on eating habits and physical conditions of an individual (**GitHub**)
- Spectral Clustering (**GitHub**)
- Liver Disease Classification (**GitHub**)

Deep Learning

- Classification for Brain Cancer MRI Images (**GitHub**)
- CNN-based model for a multi-class classification task, brain abnormality classification (**GitHub**)
- Image Captioning (**GitHub**)
- Image Semantic Segmentation (**GitHub**)
- Medical Image Registration Using Voxelmorph (**GitHub**)
- Multilayer Perceptron for DOROTHEA (a drug discovery dataset) (**GitHub**)
- Single-Cell RNA Sequencing Analysis (**GitHub**)
- Generating MNIST digits with variational autoencoder (**GitHub**)
- Classification and Interpretation for Xray Images (**GitHub**)

Signal Processing

- Exploring methods for sharpening images (**GitHub**)

Artificial Intelligence

- **Connect Four** games (**GitHub**)
- Tackling the knapsack problem with a genetic algorithm (**GitHub**)
- N-gram Language Model (**GitHub**)
- Naive Bayes Classifier (**GitHub**)

Structural Bioinformatics

- Procedures to work with protein pdb file in tcl language (**GitHub**)

CERTIFICATES

- Machine Learning (**Certificate**)
  - Supervised Machine Learning: Regression and Classification (**Certificate**)
  - Advanced Learning Algorithms (**Certificate**)
  - Unsupervised Learning, Recommenders, Reinforcement Learning (**Certificate**)
- Advanced Python programming and object-oriented thinking course (**Certificate**)

TEST TAKEN

TOEFL IBT, 6 July, 2024

Total Score: 102 (Reading: 28, Listening 28, Speaking 22, Writing 24)

SKILLS

- Python
  - TensorFlow, Keras, PyTorch, and Hugging Face
  - Numpy and Pandas
  - Scikit-learn, SciPy, OpenCV, NLTK
  - Matplotlib, Plotly
- Bio
  - BioPython
  - RDKit
- Intermediate R, Java, and C Knowledge
- TensorRT, ONNX
- MySQL
- Git/ GitHub
- Probability and Statistics
- Linux, Windows, OS X
- Latex and Microsoft Office
- Academic Writing