MEHRSHAD SAADATINIA

Master's Student at University of Southern California
(213)-804-0529 saadatin@usc.edu LinkedIn Github Scholar

EDUCATION

University of Southern California **Jan. 2024 – Present**
MS in Computer Science *Los Angeles, California, USA*

Shahid Beheshti University **Sep. 2018 – Feb. 2023**
BSc in Computer Engineering *Tehran, Iran*

- Cumulative GPA: 17.40/20 (3.7/4)
- Best B.Sc thesis
- **Coursework:** Artificial Intelligence & Expert Systems, Computer Vision, Signals and Systems, Advanced Programming, System Design&Analysis, Data Structures, Algorithms, Computational Intelligence, Compiler Design, Operating Systems

PUBLICATIONS

- "An Explainable Deep Learning-Based Method For Schizophrenia Diagnosis Using Generative Data-Augmentation." **M Saadatinia** and A Salimi-Badr (2024). *IEEE Access* [link]

EXPERIENCE

Research Intern **Jun 2024 – Present**
Laboratory of AI & Biomedical Science (LABS) *University of Southern California*

- Supervised by: Dr. Junhao Wen | Developing a method for deep clustering of Alzheimer sub-types

Research Assistant **Sep 2022 – Nov 2023**
Robotics & Intelligent Autonomous Agents (RoIAA) Lab *Shahid Beheshti University*

- Developed a novel explainable deep learning method for schizophrenia diagnosis based on deep generative models

Research Assistant **Sep 2022 – Jan 2023**
Natural Language Processing Lab *Shahid Beheshti University*

- Worked on a novel transformer-based approach for Persian informal to formal text transformation, implemented with Tensorflow and keras

Software Developement Intern **May 2021 – Sep 2021**
MCIHUB @ Shahid Beheshti University *Tehran, Iran*

- Developed a gym reservation application using Elixir Phoenix framework backend and MySQL database

TECHNICAL SKILLS

Languages and Frameworks: Python, C/C++, R, Java, JavaScript, Elixir, Django, Flask, ExpressJS, Angular, SwiftUI
Machine Learning tools: Tensorflow-2 (and Keras), Pytorch, Scikit-Learn, OpenCV, Pandas
Technologies: Git, Linux, Docker, Databases (MySQL and MongoDB), REST API

PROJECTS

Deep Learning-Based Schizophrenia Diagnosis | Notebook | App code

- Developed a deep CNN-based system for schizophrenia diagnosis, integrating a VAE-based data augmentation model that improved diagnostic accuracy by 3%, reaching 99%. Implemented the solution using TensorFlow and Keras, and deployed the application using Flask.

End-to-End Deep Face Verification Software | Available upon request

- Developed a face verification software utilizing advanced deep neural network architectures, achieving over 90% accuracy. Implemented the solution using PyTorch, optimizing model performance for real-time facial recognition tasks.

Real-time IOS Stock Trading Application | Available upon request

- Developed a full-featured iOS stock trading application using Swift (SwiftUI), and ExpressJS & MongoDB backend, allowing users to track real-time stock prices, manage portfolios, and execute trades

Social Network Analysis on Iran's Online taxi Services | Code

- Conducted social network analysis of user interactions on Iran's top online taxi platforms using Python and NetworkX, analyzing communication patterns, user behaviors, and trends.

Deep Embedded Clustering | Code

- A re-implementation of the Deep Embedded Clustering paper in PyTorch, achieving 80% clustering accuracy and successfully reproducing the original results.

More projects on my Github

CERTIFICATIONS

- Deep Learning Specialization, Machine Learning Course, Build Basic Generative Adversarial Networks