Farzad Alizadeh

EDUCATION

MSc IN MEDICAL PHYSICS | TEHRAN UNIVERSITY OF MEDICAL SCIENCES (TUMS) | Tehran, Iran — **GPA: 4/4 | Sep 2021**

BS IN PHYSICS | SHIRAZ UNIVERSITY | Shiraz, Iran — **Jul 2004**

AWARDS AND HONORS

- Ranked 2nd among my graduating class | **Sep 2020**
- Ranked 3rd in National Brain Mapping Laboratory Challenge:
  "*Predicting age of healthy subjects based on morphological features of structural MRI images*" (NBML) | **Jan 2021**
- Ranked 8th among ~1100 participants in Medical Physics entrance examination | **2018**

RESEARCH INTERESTS

NEUROIMAGING	• functional MRI • Resting State fMRI • ASL Perfusion • DTI • DWI • MRS
DATA SCIENCE	• Medical Data Analysis • Deep Learning • Machine Learning • Image Processing • Signal Processing
NEUROSCINCE	• Neurodegenerative diseases • AD • PD • ADHD • ASD
CANCER STUDIES	• Glioma • Prostate Cancer • Breast Cancer

ACADEMIC PROJECTS

DEMENTIA	▪ Implementing 3D convolutional neural networks (fed by independent component analysis features extracted from resting state functional MRI) in Python ▪ Implementing 1D convolutional neural networks (fed by blood oxygen level dependent signals of resting state fMRI) in Python
GLIOBLASTOMA	▪ Glioblastoma tissue characterization with deep learning and the brain magnetic resonance spectroscopic (MRS) data; supervised, semi supervised, and unsupervised glioblastoma brain MRS signals classification: a deep learning methodology
BRAIN FUNCTIONAL CONNECTIVITY(FC)	▪ Extracting and analyzing FC, based on graph theory to classify Alzheimer's disease from mild cognitive impairment subjects
BRAIN AGE PREDICTION	▪ Machine learning-based prediction of age from MRI images
SCIENTIFIC WEBINARS	▪ Organizing a series of scientific webinars in Iranian Chapter of International Society for Magnetic Resonance in Medicine (IR-ISMRM)

WORKSHOPS

Artificial Neural Networks | TUMS | TEHRAN, IRAN — **Mar 2020**

Machine Learning with Python | TUMS | TEHRAN, IRAN — **May 2020**

Deep Learning with Python | TUMS | TEHRAN, IRAN — **Jul 2020**

K-wave workshop (MATLAB toolbox for simulation of ultrasound) |
TUMS Preclinical Core Facility | TEHRAN, IRAN — **May 2019**

MCNPX workshop (Monte Carlo N-Particle Transport Code) |
TUMS Preclinical Core Facility | TEHRAN, IRAN — **Mar 2019**

SKILLS

COMPUTER SKILLS	• Python Programming • LINUX • Keras • Scikit-learn• TensorFlow • Pytorch • OpenCV
SOFTWARES SKILLS	• FSL • FREESURFER • COMSOL MULTI PHYSICS
LANGUAGE SKILLS	• IELTS: will be taken on Jan 2022

CONFERENCES

First National Conference on Artificial Intelligence in Medical Imaging | NBML | 2nd - 5th Nov 2019 | TEHRAN, IRAN

National Congress on Cognitive and Behavioral Neurology & Dementia | TUMS | 2nd - 4th Oct 2019 | MILAD TOWER, TEHRAN, IRAN

PUBLICATIONS

- Alizadeh F, Homayoun H, Batouli SAH, Noroozian M, Saligheh Rad HR. *Deep Learning Study of BOLD signals in Alzheimer's disease continuum: A Multi Brain Atlas Study*. 2021;
- Alizadeh F, Homayoun H, Batouli SAH, Noroozian M, Sodaie F, Salari HM, Kazerooini AF, Saligheh Rad HR. *Differential Diagnosis Among Alzheimer's Disease, Mild Cognitive Impairment, and Normal Subjects Using Resting-State fMRI Data Extracted from Multi Subject Dictionary Learning Atlas: A Deep Learning-Based Study.* 2021, Frontiers in Biomedical Technologies.
- Alizadeh F, Fathi Kazerooni A, Bahrampour H, Mobarak Salari H, Saligheh Rad HR. *Tumorous Tissue Characterization in Diffuse Glioma Based on 1H-MRS Data Employing 1D Convolutional Neural Networks* (Poster). 2021 ISMRM & SMRT Annual Meeting & Exhibition.