Termeh Taheri

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SOFTWARE PROFICIENCY

Python, TensorFlow, PyTorch, Scikit-learn, Keras, Librosa, FFmpeg, Essentia, SciPy, OpenCV, NLTK, PostgreSQL, Docker, Linux, Celery, Pytest, FastAPI, ElasticSearch, C++, Java, MATLAB, React, HTML, CSS

EXPERIENCE

Software Engineer (Backend), Roshan Company Aug 2022 - Aug 2024

- Built scalable backend systems with **Python (Django, FastAPI)** for AI-powered applications, focusing on performance, modularity, and maintainability
- Designed and optimized **REST APIs** and data pipelines, integrating machine learning models and external services
- Deployed and maintained production services on remote **Linux** servers, ensuring system configuration, security, and service reliability
- Implemented **CI** pipelines with GitLab, including automated testing (Pytest) and containerization (Docker), to support reliable backend development

AI Researcher, Computational Intelligence Laboratory Jan 2020 - Jul 2022

- Designed and trained machine learning models for cancer and COVID-19 detection from medical imaging data, achieving improved diagnostic accuracy through ensemble learning and feature engineering
- Developed deep neural networks for imagined speech classification from EEG signals, applying spectral decomposition and time-frequency analysis techniques to enhance signal quality and model interpretability

RECENT PUBLICATIONS

Taheri, M., & Omranpour, H. (2024). Breast cancer prediction by ensemble meta-feature space generator based on deep neural network. *Biomedical Signal Processing and Control*, *87*, 105382.

Omranpour, H., Mohammadi Ledari, Z., & **Taheri, M.** (2023). Presentation of encryption method for RGB images based on an evolutionary algorithm using chaos functions and hash tables. *Multimedia Tools and Applications*, *82*(6), 9343-9360.

Ongoing Research

Symbolic Audio Reasoning with LLMs

Exploring how symbolic representations of audio can be used to enable natural language reasoning over sound. The project focuses on designing a lightweight and interpretable framework that bridges audio understanding with large language models for multi-step reasoning tasks. Evaluation involves audio-based question answering in a multimodal context.

EDUCATION

MSc. Artificial Intelligence - Queen Mary University of London September 2025
Thesis: **Multimodal Machine Perception**
Advisor: Prof. Emmanouil Benetos

B.Sc. Computer Engineering - Noshirvani University of Technology July 2022
Thesis: **Ensemble deep learning algorithm for medical image analysis**
Advisor: Dr. Hesam Omranpour

HONORS & AWARDS

Chevening Scholarship: Full scholarship recipient for MSc Artificial Intelligence, QMUL 2024–2025
Babol Noshirvani University of Technology: First place for the best bachelor project across all departments 2022
Research Grant (No P/M/1110): Supported publication in *Biomedical Signal Processing and Control* 2021