Abbas Nosrat

MSc Student · Control Engineering

School of Electrical and Computer Engineering, University College of Engineering, University of Tehran, North Kargar st., Tehran, Iran.

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Education

University of Tehran *Tehran - Iran*

MSc Control Engineering *2020 - present*

- Advisors: Dr. Ahmad Kalhor, Dr. Babak N Araabi
- Thesis: Meta System Identification

Imam Khomeini International University *Qazvin-iran*

BS Electrical Engineering *2015 - 2020*

- Advisor: Dr. Hasan Zarabadipour

Research Interests

- Multi-Task Learning
- Self-Supervised Learning
- Meta-Learning
- Multi-Modal Learning

Professional Experience

2023-Present **Business Analyst**, Ronak Pharmaceutical Co

2021-Present **Research Assistant**, Ronak Pharmaceutical Co

2021-Present **Graduate Teaching Assistant**, Electrical and Computer Engineering Department, University of Tehran

Publications

Published

TFNet: Few-Shot Identification of LTI Systems Based on Convolutional Neural Networks

Honors and Awards

2020 **24th rank**, Iran's National University Entrance for Control Engineering Masters Degree

Teaching Experience

Spring 2022	**Trustworthy AI**, Teaching Assistant
Fall 2022	**Machine Learning**, Teaching Assistant
Fall 2022	**Analisys and Design of Neural Networks**, Teaching Assistant
Fall 2022	**Linear Control Systems Lab**, Teaching Assistant
Spring 2022	**System Identification**, Teaching Assistant

Projects

Completed

TFNet

This is my main master's project in which I developed a method for parametric and structural identification of industrial systems from a non-persistent excitation and a handful of I/O data.

Ongoing

TFNet 2

This project is an improvement on TFNet. In this project, I am utilizing multi-task learning methods to combine the classifier and the parameter estimator to improve TFNet's accuracy and scalability.

Coursework projects

- Implementation of UNet
- Implementation of CycleGan and VQVAE
- Implementation of rotation prediction method
- Adversarial attacks and explainability
- Few-shot classification and person reidentification using contrastive learning
- Implementation of UNet

Technical Background

Programming Languages

Python, Matlab, Bash, Julia, R,

Machine Learning Frameworks

Scikit-learn, Pytorch, Tensorflow, Flux.jl,

Development Tools

Git, Figma, Jira,

Personal Interests

- Guitar playing, singing and making music.
- Playing video games.
- Watching Movies and anime.
- Reading comics and manga.
- Reading about AI, computer hardware, and Linux topics.