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

TFNᴇᴛ

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

TFNᴇᴛ 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.

Cᴏᴜʀsᴇᴡᴏʀᴋ ᴘʀᴏᴊᴇᴄᴛs

- 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 ────────────────────────

Pʀᴏɢʀᴀᴍᴍɪɴɢ Lᴀɴɢᴜᴀɢᴇs

Python, Matlab, Bash, Julia, R,

Mᴀᴄʜɪɴᴇ Lᴇᴀʀɴɪɴɢ Fʀᴀᴍᴇᴡᴏʀᴋs

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

Dᴇᴠᴇʟᴏᴘᴍᴇɴᴛ Tᴏᴏʟs

Git,

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.