Contact

ehsan.namjoo@gmail.com

www.linkedin.com/in/ehsan-
namjoo-8a71943a (LinkedIn)

Top Skills

Machine Learning

Deep Learning

Computer Vision

Publications

Non-strictly Sparse Source Modelling
Using Heavy-tailed Distributions for
DCT Coefficients

Assessing the effect of image quality
on SSD and faster R-CNN networks
for face detection

Evaluating the effect of the
eigenvalues on BDF classifier in face
detection

Emotion discrimination using source
connectivity analysis based on
dynamic ROI identification

A region-based edge detection
technique for noisy images

Ehsan Namjoo

Machine Learning Researcher | Passionate About Explainable AI
Limerick, County Limerick, Ireland

Summary

I am an Electrical Engineer with a specialization in communication
systems. My major areas of expertise include digital communication,
information theory, and signal processing. I have conducted
foundational research in sparse signal modeling and have expertise
in source coding, data compression, channel coding, and designing
rateless codes with Unequal Error Protection (UEP) properties. In
addition, I am a highly motivated Machine Learning Researcher with
a deep passion for understanding the complex decision-making
strategies of learning networks. My expertise includes developing
and applying machine learning models to solve real-world problems.
I am particularly interested in the emerging field of Explainable AI
(XAI), as I believe that building models that are both powerful and
interpretable is crucial for fostering trust and wider adoption of AI
technology.

In my current role at the Biocomputing and Development Systems
(BDS) Group at the University of Limerick, I am working on a project
aimed at developing an Explainable Artificial Intelligence (XAI)
strategy to ensure the safety and security of edge devices used
in the robotics industry. Specifically, I am developing explainable
anomaly detection systems capable of alerting humans to any
abnormalities.

In my previous position at Shahid Chamran University (SCU) of
Ahvaz, I served as an assistant professor, where my responsibilities
included teaching, supervising students, and conducting research.
I prepared and taught several course modules for both graduate
and undergraduate students in the electrical and computer faculties.
For undergraduate students, I taught Electromagnetics, Signals and
Systems, Discrete Signal Processing, Communication Systems,
Linear Algebra, and Probability and Statistics. For graduate students,
I taught Pattern Recognition, Machine Learning, Channel Coding,
Information Theory, and Digital Communications. During my tenure
at SCU, I was actively involved in research, supervising more than

20 graduate theses and collaborating on various research projects..
During my career at SCU, I also founded the Information Theory
and Machine Learning Lab (ITML), which served as a collaborative
environment for colleagues and students to engage in research
projects, enhance their research capabilities, and work with experts
in the fields of machine learning, information theory, and signal
processing. Additionally, I contributed to organizing conferences and
collaborated with colleagues and experts from other universities.

Experience

University of Limerick
Researcher at Biocomputing and Development Systems Group
February 2024 - Present (7 months)
Limerick, County Limerick, Ireland

Developing an Explainable AI (XAI) Strategy to Ensure Safety and Security of
Edge Devices

Information Theory and Machine Learning Laboratory
Head of Information Theory and Machine Learning Lab
September 2017 - March 2024 (6 years 7 months)
Ahvaz

The ITML Laboratory (Information theory and Machine Learning) is a research
group under the supervision of Dr. Ehsan Namjoo at Shahid Chamran
University of Ahvaz. ITML is mostly focused on studies in Information theory
and machine learning. it also incorporates interdisciplinary research areas.

Shahid Chamran University of Ahvaz (Jundi Shapur)
Assistant Professor
January 2012 - March 2024 (12 years 3 months)
Ahvaz County, Khuzestan Province, Iran

University of Tabriz
Research Assistant
September 2006 - September 2011 (5 years 1 month)

Education

University of Tabriz

Doctor of Philosophy (PhD), Electrical Engineering-Communications · (2006 - 2011)

University of Tabriz
Master's degree, Electrical Engineering - Communications · (2004 - 2006)

K. N. Toosi University of Technology
Bachelor, Electrical Engineering-Control