Ali Nabipour

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EDUCATION

Politecnico di Milano 2024 – Now
Master of Science in Computer Science (Artificial Intelligence) *Milan, Italy*

· GPA: -

University of Guilan 2019 – 2023
Bachelor of Science in Computer Engineering *Rasht, Iran*

· GPA: 3.86/4
· Relevant Coursework: Advanced Programming, Data Structure, Algorithm Design, Artificial Intelligence, Speech and Language Processing, Deep Learning.

RESEARCH INTERESTS

· Machine Learning   · Natural Language Processing   · Computer Vision
· Deep Learning   · Large Language Models   · Biomedical Enginerering

PUBLICATION

· **Nabipour, A.**, Shams Nejati, M. J., Boreshban, Y., & Mirroshandel, S. A. (2024). **Less-supervised learning with knowledge distillation for sperm morphology analysis.** *Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization.* DOI — Code

EXPERIENCE

Machine Learning Engineer 2022 – Present
FANAP Advanced Technology Lab (ZLab)

· **Persian Automatic Speech Recognition**: Developed a speech-to-text system using transfer learning with Wav2Vec2, and enhanced context accuracy with language models.
· **Content-based Music Recommender**: Developed a novel recommender system using waveform data exclusively, employing unsupervised contrastive learning based on SimCLR.
· **Banking Conversational Chatbot**: Implemented Rasa Core for dialogue management, employed FastText and RoBERTa for intent recognition and language modeling.

Research Assistant 2022 – 2024
University of Guilan *Advisor: Dr. S. A. Mirroshandel*

· Developed a **deep learning-based less-supervised approach** for sperm morphology analysis using **knowledge distillation** from pre-trained models, enabling efficient fine-tuning on limited labeled data.
· implemented data augmentation techniques, **adversarial attacks**, and custom loss functions to enhance the robustness and generalization of the model and overcome data scarcity challenges.
· This project's findings were shared through publication in a peer-reviewed academic journal.

Teaching Assistant 2021 – 2023
University of Guilan

· As the head teaching assistant, my role involved designing and evaluating comprehensive course projects, producing educational videos, and providing guidance on student assignments.
· Courses: Artificial Intelligence (Dr. Boreshban), Digital Circuit (Dr. Aminian), Advanced Programming (Dr. Mirroshandel), Principles of Computer & Programming (Dr. Shekarian)

AWARDS AND ACHIEVEMENTS

- **Full Scholarship**, B.Sc, University of Guilan
- **Ranked 4th among B.Sc Computer Engineering Students**, University of Guilan
- **Member of Scientific Association of Computer Engineering**, University of Guilan
- **National Organization for Development of Exceptional Talents (NODET)**, High School, Diploma

KEY SKILLS

Programming Languages	Python, C++, Java
ML Framework	PyTorch, TensorFlow, Huggingface, LangChain
Data Science Tools	Numpy, Pandas, Scikit-Learn
Additional Skills	Linux, Git, Docker, Latex
Technical Expertise	Machine Learning, Deep Learning, Natural Language Processing, Computer Vision, Data Structures, Algorithms

CERTIFICATIONS

- **Natural Language Processing Specialization**, *Coursera, DeepLearning.AI.* certificate
- **Introduction to Data Science in Python**, *Coursera, University of Michigan.* certificate
- **Machine learning**, *Coursera, Andrew Ng.* certificate
- **Algorithms Specialization**, *Coursera, Stanford University* certificate