# Ali Nabipour

#### **EDUCATION**

# 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 Engineering

### **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

#### **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 ToolsNumpy, Pandas, Scikit-LearnAdditional SkillsLinux, Git, Docker, Latex

Technical Expertise Machine Learning, Deep Learning, Natural Language Processing, Com-

puter 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