# Sepehr SeifiZarei

*Data Scientist and AI Engineer*


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## About Me

Highly motivated Data Scientist and Biomedical Engineer with expertise in machine learning, data analytics, and health technology. Passionate about advancing healthcare innovation through unobtrusive monitoring solutions for cardiovascular diseases.

## Skills

**Programming Languages:**
Python, MATLAB, SQL

**Deep Learning Frameworks:**
TensorFlow, Keras, PyTorch

**Data Tools:**
Apache Airflow, AWS, GitHub

**Data Science:**
Data Analytics, Data Visualization

## Publications

**Continuous Radar-based Heart Rate Monitoring using Autocorrelation-based Algorithm in Intensive Care Unit**,
IEEE Journal of Biomedical and Health Informatics, 2025

**Evaluating Piezoelectric Ballistocardiography for Post-Surgical Heart Rate Monitoring**,
Computing in Cardiology (CinC), 2024

## Languages

English: Fluent (TOEFL 105/120)
Finnish: Beginner
Persian: Native

## References

**Arman Anzanpour**
Senior Researcher and Developer
Universty of Turku
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**Additional references available upon request**

## Work Experience

**Data Scientist**
RM4Health, University of Turku — 06/2023 – Present

- Developing algorithms and scalable data pipelines for heart failure analysis using multimodal clinical datasets.
- Collaborating with interdisciplinary teams to design and deploy AI-driven healthcare solutions.

Moore4Medical, University of Turku — 06/2022 – 05/2023

- Conducted signal processing, feature extraction, and algorithm development for vital sign monitoring and atrial fibrillation detection.
- Developed machine learning models to improve diagnostic accuracy and clinical outcomes.

**Teaching Assistant**
Medical Instrumentation course, University of Turku — Spring 2024

- Guided students in designing and simulating ECG and PPG circuits using LT Spice.
- Supported hands-on lab sessions, assisting with circuit implementation and data interpretation.

## Education

**D.Sc. Health Technology, University of Turku, Finland** 2023 – Present

- **Thesis:** Unobtrusive Monitoring for Cardiovascular Disease using ML.
- Algorithm development for cardiovascular disease monitoring.
- Developing and deploying data pipelines for clinical signal analysis.

**M.Sc. Biomedical Engineering, KNTU, Iran** 2018 – 2022

- **GPA:** 4/4 | **Thesis:** Ultrasound Image Despeckling with Deep Learning.
- Implemented deep learning models for medical image processing.
- Experienced in MATLAB and Python for signal and image processing.

**B.Sc. Electrical Engineering, BASU, Iran** 2013 – 2018

- **GPA:** 3.5/4 | **Thesis:** Application of FibroScan®.
- Acquired fundamental knowledge of electronic circuits, signal processing, and embedded systems.
- Worked on team projects in microcontroller programming and robotics.