Sepehr SeifiZarei
Data Scientist and AI Engineer

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About Me

I am a 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 in ICU,
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

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.