Ali Isapour

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GitHub
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Education

- **Sahand University of Technology** *Tabriz,Iran*
  Bachelor of science *in Electrical Engineering (Telecommunication)* 2023

  – **GPA:** 17.58/20 (3.71 out of 4)

  – **Thesis:** Multi-channel noise reduction methods based on wiener filtering, **Grade: 20/20**
  – **Supervisor:** Dr.M.Azghani

- **Kharazmi high school** *Tehran,Iran*
  Diploma in mathematics and physics 2018

  – **GPA:** 19.70/20 (4 out of 4)

Publications

- **Unconventional VAD in Noisy Environments based on Otsu** *IET Communications Journal*
  A.Isapour *and A.Ebrahimi* submitted: 2024
- **VAD-IED: Voice Activity Detection based on Image Edge Detection Methods** *In progress*
  A.Isapour *and A.Ebrahimi*
- **Detecting voice activity using Machine Learning** *In progress*
  A.Isapour *and M.Azghani*

Research Interests

- **Deep learning-based signal processing**
- **Speech and image processing**
- **Biomedical Signal Processing**
- **Mathematics of Data Science**
- **Wireless Communications**
- **Machine Learning**

Experiences

- **ICT research center** *Sahand University of Technology, Tabriz, Iran*
  Research Assistant*, Under supervision of Prof.A.Ebrahimi* 2023 - present

  – Developed innovative algorithms to achieve precise voice activity detection in noisy environments
  – Implemented the methodologies described in research papers using MATLAB and Python for simulation
  – Integrated image processing methods, into speech processing applications

- **Wireless Communications and Signal Processing laboratory** *Sahand University of Technology, Tabriz, Iran*
  Research Assistant*, Under supervision of Dr.M.Azghani* 2023 - present

  – Designed novel feature extraction techniques employed by machine learning classifiers for voice activity detection
  – Developed a novel method for classifying phonocardiogram (PCG) signals leveraging machine learning techniques

- **Regional Water company of Tehran, Latyan dam** *Tehran,Iran*
  Internship Summer. 2021

  – Collaborated within an electrical engineering industry team, cultivating professional skills, effective communication, and project success

- **Principle of computer programming Class** *Sahand University of Technology, Tabriz, Iran*
  Teaching Assistant*, Under supervision of Dr.N.Soltani* Fall. 2020

  – Employed problem-solving skills and provided assistance to students encountering challenges in C++ programming, ensuring comprehension and mastery of coding concepts

Honors And Awards

- **Ranked 2*nd* in the Department of Electrical Engineering among nearly 90 entrants of 2018**
- **Ranked 1*st* in the Department of Electrical Engineering major Telecommunication among nearly 20 students**
- **Ranked 1*st* in all four years of high school**

Course Projects

- **Implementing noise reduction techniques for voice signals using MATLAB**
  as the final project of Digital Signal Processing course, Under supervision of Prof.Sedaghi
- **Analyzed electrical circuits with PSpice, identifying transistor operating points and coordinates**
  as the final project of Electronics I course, Under supervision of Dr.Bahrami
- **Simulation of the distribution of electrical potential across conductor plates using MATLAB**
  as the final project of Electromagnetism course, Under supervision of Dr.Habibzadeh
- **Designed a MATLAB communication system integrating coding and decoding for transmission and reception**
  as the final project of Digital communication lab course, Under supervision of Dr.M.Azghani

Selected Courses

- **Undergraduate Courses**

Digital Signal Processing: 4/4
Neural Networks: 4/4
Probability and Statistics: 4/4
Mathematics ***I***, Mathematics ***II***: 4/4
Principles of computer programming: 4/4
Digital Communication: 4/4
Telecommunication Networks: 4/4
Filters & Circuit Synthesis: 4/4
Digital Systems ***I***, Digital Systems ***II***: 4/4
Physics of Electronic Devices: 4/4
Electronics ***I***, Electronics ***II***: 4/4
Microprocessor: 4/4
Electromagnetism: 4/4
Microwaves and Antennas: 4/4
Digital Communication Lab: 4/4
Communication Circuit Lab: 4/4

- **Online Courses**

Deep Learning, University of Tehran, Alireza Akhavanpour
Introduction to programming with MATLAB, Coursera

Skills And Abilities

- **Programming languages:** MATLAB, Python, C++, C, AVR programming (atmega 32), Assembly
- **Software:** MATLAB, Atmel Studio, VS code, Jupyter, Microsoft Office, LaTeX
- **Simulation and Design Software:** MATLAB (Simulink), Proteus
- **Operation Systems:** Windows (7,10), Mac os X (All versions)
- **Abilities:** Self-Motivated and Driven, Teamwork and Collaboration, Research and Analysis, Time Management

Languages Proficiency

- **English:** Fluent (IELTS Test will be taken in near future)
- **Persian:** Native or bilingual proficiency
- **Azerbaijani:** Native or bilingual proficiency
- **Turkish:** Intermediate
- **Germany:** Elementary

Refrences

- **Prof. Afshin Ebrahimi: aebrahimi@sut.ac.ir** ***Professor***
  Electrical Engineering Department, Sahand University of Technology, Tabriz, Iran **Scholar**
- **Dr.Masoumeh Azghani: mazghani@sut.ac.ir** ***Associate Professor***
  Electrical Engineering Department, Sahand University of Technology, Tabriz, Iran **Scholar**