

# Ali Isapour

✉ aliisapourr@gmail.com

Website: aliisapour.github.io

🐙 GitHub

🌐 LinkedIn

## EDUCATION

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- **Sahand University of Technology** Tabriz, Iran  
*Bachelor of science in Electrical Engineering (Electronics and Communications)* 2023
  - Last 2 years GPA: 3.96/4
  - 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: 4/4

## PUBLICATIONS

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

## RESEARCH INTERESTS

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

## EXPERIENCES

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- **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

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

## COURSE PROJECTS

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- **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

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### • 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

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- **Programming languages:** MATLAB, Python, C++, C, AVR programming (atmega 32), Assembly
- **Software:** MATLAB, Atmel Studio, VS code, Jupyter, Microsoft Office, L<sup>A</sup>T<sub>E</sub>X
- **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

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- **English:** IELTS Test will be taken in near future
- **Persian:** native or bilingual proficiency
- **Turkish:** native or bilingual proficiency
- **Germany:** Elementary

## REFERENCES

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