Reza Adinepour

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Research Interests

- ◇ Machine Learning
- ◇ Deep Learning
- ◇ Image Processing
- ◇ Computer Vision
- ◇ Pattern Recognition
- ◇ Real-time and Embedded Systems

Education

M.Sc. in Computer Engineering, Sept. 2023 - Present
Amirkabir University of Technology (Tehran Polytechnique), Tehran, Iran
- ◦ Thesis: *"Coming soon"*
- ◦ Advisor: Prof. Morteza Saheb Zamani

B.Sc. in Electrical Engineering, Sept. 2019 - Jun. 2023
Shahrood University of Technology, Shahrood, Iran
- ◦ Thesis: *"Design Real Time Face Recognition Systems Based on LBP features on ODROID-XU4 Embedded Computer Board"*
- ◦ Advisor: Prof. Alireza Ahmadifard
- ◦ GPA: 3.28/4
  GPA of Last 1 Years: 3.43/4 (32 credits)

Diploma in Mathematics and Physics Discipline, Sept. 2015 - May. 2019
Seyyed Ahmad Khomeini High School, Mashhad, Iran
- ◦ Diploma GPA: 3.66/4

Attended Conferences

- ◇ The Annual Conference on Prospects of Electrical Engineering (ReACT2023), 2023, Tehran, Iran
- ◇ The Annual Conference on Prospects of Electrical Engineering (ReACT2022), 2022, Tehran, Iran
- ◇ Rahneshan National competition, 2021, Tehran, Iran
- ◇ 5th Iranian Conference on Communications Engineering (ICCE2021), 2021, Shahrood, Iran
- ◇ The Annual Conference on Prospects of Electrical Engineering (ReACT2021), 2021, Tehran, Iran
- ◇ Amirkabir University of Technology Robotics Summer School, 2020, Tehran, Iran

Research Experience

- ◇ **Real Time Embedded Face Recognition System** Sep. 2022 - Jun. 2023
  Research Assistant, Supervisor: Prof. Alireza Ahmadifard, Department of Electrical engineering, Shahrood University of Technology.
  - · *Studies and research focused on* ***LBP Features***
    I design an embedded systems that can detect and recognition human face, based on LBP features. This algorithm implement on **odroid** embedded computer.
- ◇ **Otoacoustic Emissions** Jun. 2021 - Sep. 2022
  Research Assistant, Supervisor: Dr. Mohammad Reza Ashraf, Department of Electrical engineering, Shahrood University of Technology.
  - · *Studies and research focused on* ***Hard Ware of OAE's***
    Otoacoustic emissions (OAEs) are widely used in universal newborn hearing screening programs. In this Research we are looking for design and implement of OAE device for recognition hearing loss in childrens.

Teaching Experience

Teaching Assistant-Shahrood University of Technology
- ◦ **Digital Electronics** Spring 2023
- ◦ **Signal and Systems** Spring 2023, Fall 2022, Spring 2022, Fall 2021

- **Analog Electronic** Fall 2022
- **Circuit Theory** Fall 2020, Spring 2020

Tutor-Shahrood, Iran
- **Private Altium Designer Tutor** Apr. 2023 - Aug. 2023

Tutor-Mashhad, Iran
- **Private ARM-STM32 Microcontroller Programming Tutor** 2021 - Jan. 2022
- **Private MATLAB Programming Tutor** 2021 - Jan. 2022
- **Private C and C++ Programming Tutor** 2020 - Jan. 2022

Honors and Awards

- **Ranked** 2^{th} **(top 1%)** in **Department of Electrical Engineering, Shahrood University of Technology**, Among more than 150 Students. 2023
- **Chief** of Student **Scientific Association** of Electrical Engineering 2022

Notable Projects

- **Embedded Hardware Implementation of Face Recognition System Based on Deep Neural Networks** </Source>
  Bachelor Thesis, Shahrood University of Technology, Shahrood, Iran
- **Design and Implementation of Sine Wave Generator Using STM32-F446RE Nucleo Board** </Source>
  Top Project in OAE Challenge, Integrated Circuit Laboratory, Shahrood University of Technology, Shahrood, Iran
- **Implementation of Real Time Object Detection Using YoLo Network** </Source>
  Course Project for Neural Networks, Shahrood University of Technology, Shahrood, Iran
- **Implementation of Real Time Face Mask Detection Using Neural Network** </Source>
  Course Project for Neural Networks, Shahrood University of Technology, Shahrood, Iran
- **Implementation of Handwritten Digit Recognition Using Neural Network** </Source>
  Course Project for Neural Networks, Shahrood University of Technology, Shahrood, Iran
- **Implementation of Car Tracking With OpenCV** </Source>
  Course Project for Advanced Programming in C++, Shahrood University of Technology, Shahrood, Iran
- **Implementation of Student Registration Program**
  Course Project for Advanced Programming in C++, Shahrood University of Technology, Shahrood, Iran
- **Implementation of Real Time Face Recognition Using Python** </Source>
- **Implementation of Object Tracking with OpenCV & Python** </Source>
- **Implementation of Vehicles Counton on Images Using Python** </Source>
- **Implementation of Real Time Color Detection Using Python** </Source>
- **Implementation of ATM User Interface Program Using Python**
  Top mark project in the course of Object Oriented Programming in Python, GARD Academy, Tehran, Iran
- **Design and Implementation of Noise Reduction Filter Using MATLAB**
  Course Project for Communication Systems, Shahrood University of Technology, Shahrood, Iran
- **Design and Implementation of 16-bit ALU Using VHDL**
- **Implementation of isolated Smart Relay Control Board Using AVR Microcontroller**
  Top mark project in the course of AVR Programming, GARD Academy, Tehran, Iran
- **Implementation of Digital lock System With RFID Option Using AVR Microcontroller**
  Course Project for Microprocessor, Shahrood University of Technology, Shahrood, Iran

- ◇ **Implementation of Room Temperature Controller Using ARM Microcontroller**
  Course Project for Microprocessor, Shahrood University of Technology, Shahrood, Iran
- ◇ **Design and Implementation of Multilayer PCB Using Altium Designer**
- ◇ **Design and Implementation of STM32-F103-RET6 Based Development Board Using Altium Designer** </Source>
  Top mark project in the course of ARM Programming, GARD Academy, Tehran, Iran
- ◇ **Design and Implementation of AT-Mega32 Based Development Board Using Altium Designer**
  Course Project for Microprocessor, Shahrood University of Technology, Shahrood, Iran
- ◇ **Design and Implementation of AT-Mega128 Based Development Board Using Altium Designer**
  Top mark project in the course of AVR Programming, GARD Academy, Tehran, Iran
- ◇ **Design and Implementation of Single Stage Amplifier**
  Course Project for Analog Electronics, Shahrood University of Technology, Shahrood, Iran
- ◇ **Design and Implementation of Simple Power Supply**
  Course Project for Electronic Lab, Shahrood University of Technology, Shahrood, Iran

Work Experience

R&D department Member, at Fin Company Jun. 2023 - Present
Tehran, Iran
Job Description: Biomedical Signal Processing Developer

R&D department Member, at Radan Electronic StartUp May. 2022 - Aug. 2022
Mashhad, Iran
Job Description: Embedded Software Developer

R&D department Member, at Integrated Circuit Laboratory Jun. 2021 - Sep. 2022
Shahrood, Iran
Job Description: Head of The Hard Ware department on OAE Project

Skills

- ◇ **Programming Languages:** C, C++, Python, Matlab, VHDL, Verilog HDL, Arduino, NI LabVIEW
- ◇ **Machine Learning Tools:** PyTorch, TensorFlow, Keras, Scikit-learn, OpenCV, NumPy, Pandas
- ◇ **Applications and Scientific Tools:** Altium Designer, KiCad, ADS, Hspice, Pspice, Proteus, Xilinx Vivado, Xilinx ISE, IAR, Keil, CubeMX, CodeVision AVR, ModelSim, Atmel Studio, Arduino IDE, Microsoft Visual Studio, Eclipse, Git, JetBrains Pycharm & Clion, Embarcadero Dev-C++, Matlab, Matlab Simulink, MS Office
- ◇ **Operating Systems:** Linux(Ubuntu), Unix, Microsoft Windows
- ◇ **Typesetting:** TEX, LATEX, VIM , Microsoft Word, Gnuplot

Languages

- ◇ **Persian:** Native Language
- ◇ **English:** Intermediate Listener, Novice Speaker, Advanced Reading and Writing

Hobbies

- ◇ **Adventure:** Hiking, Hitchhiking, Camping
- ◇ **Art:** Guitarist
- ◇ **Other Hobbies:** Classic Music, Freelance Blog Writer, Reading
  I love the feeling of sharing my experiences with others through my blog.