

# Shervin Fallahnejad

EMBEDDED HARDWARE/FIRMWARE DEVELOPER · ELECTRONICS EXPERT

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## Education

### Semnan Azad University (SIAU)

B.SC. IN INDUSTRIAL ENGINEERING - INDUSTRIAL PRODUCTION

Semnan, Iran

Sep. 2004 - Exp. May. 2010

## Skills

### Electronics

Altium Designer, LabView, PSpice, Keil uVision, MPLAB, MikroC, MikroBasic, MikroPascal, HT-IDE3000(Holtek), PlatformIO, ESP-IDF, Proteus, Bascom, CodeVision

### Mechanics

SolidWorks, AutoCad

### Programming

C/C++, Basic, Pascal, Visual CSharp, Visual Basic, Java

### GUI

Qt, HTML, CSS, JS

### Platform

Microcontroller, Linux, Windows, Android, Commodore 64

### DevOps

Bash, git, cmake

## Experience

### YAMA Electronics

CO-FOUNDER & ELECTRONICS DESIGN ENGINEER

Tehran, Iran

Sep 2020 - Present

- We are producing Home Appliances electronic boards, such as Kitchen Hood, Oven, Stove Timer, etc... .
- We are working with different company in whole country (Iran).

### Unalink Co.

ELECTRONIC DESIGN ENGINEER

Tehran, Iran

Apr 2020 - Sep 2020

- Designed a Remote Terminal Unit (RTU) to enable information exchange between physical power grid and distributed control system.
- Developed a web server to communicate data from web to RTU on STM32.

### Ovio Smart World - Smart Home and Office Automation

SOFTWARE & HARDWARE ENGINEER

Tehran, Iran

Nov 2019 - Feb 2020

- Design and Development a Hardware based on ESP32, as a Connected IR Blaster.
- Implement and Development a File System for ESP32.

### Samsson Group

SOFTWARE & HARDWARE ENGINEER

Tehran, Iran

Apr 2019 - Sep 2019

- IoT Platform Development.

### Fara Fan Faraz Tadbir

SOFTWARE & HARDWARE ENGINEER

Tehran, Iran

Sep 2015 - Sep 2016

- Design and Development of Poultry Farming Environmental Control System
- Monitoring and Control of Industrial Refrigeration System.

### Tosan Rahvar - Design and Production of Electronic Switches

SOFTWARE & HARDWARE ENGINEER

Tehran, Iran

Aug 2013 - Present

- Design and Development of Touch Control Switch for Kitchen Hood.
- Design and Development of Elevator Touch Button.
- Design and Development of Oven Controller.

### Negaresh Rayaneh Pouya (NRP)

SOFTWARE & HARDWARE ENGINEER

Tehran, Iran

Sep 2014 - Sep 2015

- Design and Development of Industrial Oil and Gas Electric Actuator.
- Design and Development of Pilatus PC-6 Porter Altimeter.
- Design and Development of Boost Converter 6v to 19v 3Amp.

## NoAvaran Tajhizat Imen Bargh (NATIB)

SOFTWARE & HARDWARE ENGINEER

- Design and Development of Electronic Grounding System.
- Design and Development of Fluorescent Electronic Ballast.

Tehran, Iran

Aug 2013 - Feb 2014

## Kimia Behsanj

SOFTWARE & HARDWARE ENGINEER

- Designed and developed a Hardware based on PIC32, as a Tensile Machine controller.
- Implement and develop Tensile machine software in CSharp.
- Implement a bootloader in CSharp software to remotely upgrade hardware.

Tehran, Iran

Aug 2013 - Present

## Gaam Electric - Welding & Cutting Equipment

ELECTRONIC DESIGN ENGINEER & FIRMWARE DEVELOPER

- Designed and developed a GUI and Hardware as a HMI for TIG 500A welding machine.
- Designed and developed a Database on PIC32 to handle lots of data related to welding machine.
- Implement a software in CSharp to communicate with a Hardware for test welding machines operations.

Sari, Iran

Nov 2011 - Mar 2013

## Extracurricular Activity

### Amirkabir University of Technolog - Robotic Institute

MEMBER

- Gained expertise in penetration testing areas, especially targeted on web application and software.
- Participated on a lot of hacking competition and won a good award.
- Held several hacking competitions non-profit, just for fun.

Tehran, Iran

Nov. 2011 - PRESENT

## Honors & Awards

### INTERNATIONAL

- |      |  |               |
|------|--|---------------|
| 2012 | <b>Finalist</b> , Amirkabir University of Technology Robotics & Artificial Intelligence Festival & 4th National Kharazmi Robotics Competitions | Tehran, Iran  |
| 2010 | <b>3rd Place</b> , Isfahan University of Technology Robotics Competitions  | Isfahan, Iran |

## Projects

### Minimal LED Floor Lamp

PERSONAL

- Self-Learning Capability
- Touch Control
- Anodized Aluminium Profile

Tehran, Iran

2020

### Monitoring and Control of Server & UPS Rooms Environmental Parameters

NATIONAL RESEARCH INSTITUTE FOR SCIENCE POLICY OF IRAN

- Monitoring and Control using a Web-Server.
- Linux OS on a Raspberry Pi.
- BLE Temperature & Humidity Sensors.
- Monitoring all UPS's Parameters using SNMP.
- Universal IR Blaster to Control A/C.
- Call and SMS in case of CRITICAL conditions.

Tehran, Iran

2020

### Monitoring and Control of Industrial Refrigeration. (Poultry Cold Storage)

FARA FAN FARAZ TADBIR

- Monitoring and Control using a Web-Server.
- Linux OS on a Raspberry Pi.
- DS18B20 1-Wire Temperature Sensors in a Mesh Network.
- Tiny self designed UPS to keep system alive in power failure.

Tehran, Iran

2020

### Design and Development of Touch Control Switch for Kitchen Hood

TOSAN RAHVAR

- Capability to Record and Play Voice Messages on Kitchen Hood.
- LED Display.
- Temperature and Gas Sensors.
- IR Remote Control.
- Switching Power Supply.

Tehran, Iran

2019

## Design and Development of Elevator Touch Button

TOSAN RAHVAR

- I2C Protocol.
- Unique Address for each Button.
- Touch Sensitivity Up to 5CM.
- RGB LED Indicator.

Tehran, Iran

2019

## Design and Development of Oven Controller

TOSAN RAHVAR

- Linux OS on a NanoPi Fire2A.
- 7" Touch Display.
- Nice GUI Implemented using Qt.

Tehran, Iran

2018

## Design and Development of Touch Control Switch for Kitchen Hood

TOSAN RAHVAR

- 16 WS2812 RGB LEDs.
- Temperature and Gas Sensors.
- IR Remote Control.
- Switching Power Supply.

Tehran, Iran

2018

## IoT Platform Development

SAMSSON GROUP

Tehran, Iran

2018

## Infrared Heating Panel

PERSONAL

- Make an Conducting Ink using Graphite and other Chemical Materials.
- 85°C on 12V, 4A Input.
- It had cracks in the structure and need some improvement...

Tehran, Iran

2017

## Design and Development of Poultry Farming Environmental Control System

FARA FAN FARAZ TADBIR

- 7-Segment Display.
- PIC18 Series as a Core Processor.
- DS1307 RTC.
- Sensirion SHT21 Temperature & Humidity Sensor.
- Sensirion Pressure Sensor.
- RS485 Protocol.
- Aviculture algorithm.

Tehran, Iran

2016

## Design and Development of Industrial Oil and Gas Electric Actuator

NEGARESH RAYANEH POUYA

- ATEX Certification
- Multi-turn Capability Inching/positioning and On/Off
- Wedge, Knife, Sluice/weir, Diaphragm, Conduit/slab, Parallel slide, Globe, Choke, Butterfly, Ball, Plug, Damper Can be installed.
- 250 Actuators on Rayabus Specific Network are Fully under Control and also Modbus and Profibus.
- Configuration and Calibration without need to open Actuator Panel.

Tehran, Iran

2015

## Design and Development of Pilatus PC-6 Porter Altimeter

NEGARESH RAYANEH POUYA

- Broadcom Avago Dot-Matrix Display.
- PIC18 Series as a Core Processor.
- Pressure Sensor.
- Stepper Motor.

Tehran, Iran

2015

## Design and Development of Boost Converter 6v to 19v 3Amp

NEGARESH RAYANEH POUYA

Tehran, Iran

2014

## Design and Development of Injection Machine PLC

PISHRO POUYESH

- Linux on CubiBoard Mini Computer.
- PIC32 IO Control board with LAN Interface to CubiBoard.

Tehran, Iran

2014

## Design and Development of Electronic Grounding System

NOAVARAN TAJHIZAT IMEN BARGH (NATIB)

- Protect against Spark in Explosive Gas Atmospheres.
- Based on Op-Amps.

Tehran, Iran

2013

### **Design and Development of Fluorescent Electronic Ballast**

NOAVARAN TAJHIZAT IMEN BARGH (NATIB)

- Protect against Spark in Explosive Gas Atmospheres.
- 2-Channel.

Tehran, Iran

2013

### **Implemented Value Engineering - Material Substitution Model**

GAAM ELECTRIC - WELDING & CUTTING EQUIPMENT

Sari, Iran

2012

### **Developed and Implemented a Database on MCU Flash**

GAAM ELECTRIC - WELDING & CUTTING EQUIPMENT

- Save and Load Lots of Parameters with its own Attributes with ease.

Sari, Iran

2012

### **Developed and Implemented USB HID Bootloader on PIC32MX460F512L**

GAAM ELECTRIC - WELDING & CUTTING EQUIPMENT

Sari, Iran

2012

### **Design and Development of Welding Machine Control Panel**

GAAM ELECTRIC - WELDING & CUTTING EQUIPMENT

- PIC18 Series as a Core Processor.
- 128x64 GLCD

Semnan, Iran

2011

### **Design and Development of Liquid Level Monitoring In A Large Tank**

PERSONAL

- Atmel AVR Atmega8 as a Core Processor.
- Ultrasonic.
- LPT Communication to Computer.
- Use of MATLAB for Data Analysis.

Semnan, Iran

2010

### **Work with a Fingerprint Sensor**

PERSONAL

- Transfer Data on RS232 Protocol.

Behshahr, Iran

2009

### **Design and Development of Stroboscope for Extruder Machine Blade Calibration**

BEHPAK INDUSTRIAL CO.

Behshahr, Iran

2009