

# Shervin Fallahnejad

EMBEDDED HARDWARE/FIRMWARE DEVELOPER · ELECTRONICS EXPERT

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"Some titles are hyperlink, you can click on them for further informations."

## 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

- Producing home appliances electronic boards, such as kitchen hood, oven, stove timer, etc.
- Working with different companies 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

- Development and modification an IoT Platform project on Github.

### 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.

## Experience (contd.)

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### NoAvaran Tajhizat Imen Bargh (NATIB)

SOFTWARE & HARDWARE ENGINEER

Tehran, Iran

Aug 2013 - Feb 2014

- Design and development of electronic grounding system.
- Design and development of fluorescent electronic ballast.

### Kimia Behsanj

SOFTWARE & HARDWARE ENGINEER

Tehran, Iran

Aug 2013 - Present

- Designed and developed a hardware based on PIC32, as a tensile machine controller.
- Implemented and developed tensile machine software in CSharp.
- Implemented a bootloader in CSharp software to remotely upgrade hardware.

### Gaam Electric - Welding & Cutting Equipment

ELECTRONIC DESIGN ENGINEER & FIRMWARE DEVELOPER

Sari, Iran

Nov 2011 - Mar 2013

- 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.
- Implemented a software in CSharp to communicate with a hardware for test welding machines operations.

## Extracurricular Activity

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### Amirkabir University of Technolog - Robotic Institute

MEMBER

Tehran, Iran

Nov. 2011 - Feb 2012

- Design and development of a hardware to control rescue robot.

## Honors & Awards

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### INTERNATIONAL

2012 **Finalist**, Amirkabir University of Technology Robotics & Artificial Intelligence Festival & 4th National Kharazmi Robotics Competitions

Tehran, Iran

2010 **3rd Place**, Isfahan University of Technology Robotics Competitions

Isfahan, Iran

## Projects

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### Minimal LED Floor Lamp

PERSONAL

Tehran, Iran

2020

- Self-learning capability
- Touch control
- Anodized aluminium profile

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

NATIONAL RESEARCH INSTITUTE FOR SCIENCE POLICY OF IRAN

Tehran, Iran

2020

- 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.

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

FARA FAN FARAZ TADBIR

Tehran, Iran

2020

- 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.

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

TOSAN RAHVAR

Tehran, Iran

2019

- Capability to record and play voice messages on kitchen hood.
- LED display.
- Temperature and gas sensors.
- IR remote control.
- Switching power supply.

# Projects (contd.)

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## Design and Development of Elevator Touch Button

Tehran, Iran

TOSAN RAHVAR

2019

- I2C protocol.
- Unique address for each button.
- Touch sensitivity up to 5CM.
- RGB LED indicator.

## Design and Development of Oven Controller

Tehran, Iran

TOSAN RAHVAR

2018

- Linux OS on a NanoPi Fire2A.
- 7" Touch display.
- Nice GUI implemented using Qt.

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

Tehran, Iran

TOSAN RAHVAR

2018

- 16 WS2812 RGB LEDs.
- Temperature and gas sensors.
- IR remote control.
- Switching power supply.

## IoT Platform Development

Tehran, Iran

SAMSSON GROUP

2018

## Infrared Heating Panel

Tehran, Iran

PERSONAL

2017

- 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... .

## Design and Development of Poultry Farming Environmental Control System

Tehran, Iran

FARA FAN FARAZ TADBIR

2016

- 7-Segment display.
- PIC18 series as a core processor.
- DS1307 RTC.
- Sensirion SHT21 tempreture & humidity sensor.
- Sensirion pressure sensor.
- RS485 protocol.
- Aviculture algorithm.

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

Tehran, Iran

NEGARESH RAYANEH POUYA

2015

- 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.

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

Tehran, Iran

NEGARESH RAYANEH POUYA

2015

- Broadcom Avago Dot-Matrix display.
- PIC18 series as a core processor.
- Pressure sensor.
- Stepper motor.

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

Tehran, Iran

NEGARESH RAYANEH POUYA

2014

## Design and Development of Injection Machine PLC

Tehran, Iran

PISHRO POUYESH

2014

- Linux on CubiBoard mini computer.
- PIC32 IO control board with LAN inteface to CubiBoard.

## Projects (contd.)

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### Design and Development of Electronic Grounding System

Tehran, Iran

NOAVARAN TAJHIZAT IMEN BARGH (NATIB)

2013

- Protect against spark in explosive gas atmospheres.
- Based on Op-Amps.

### Design and Development of Fluorescent Electronic Ballast

Tehran, Iran

NOAVARAN TAJHIZAT IMEN BARGH (NATIB)

2013

- Protect against spark in explosive gas atmospheres.
- 2-Channel.

### Implemented Value Engineering - Material Substitution Model

Sari, Iran

GAAM ELECTRIC - WELDING & CUTTING EQUIPMENT

2012

### Developed and Implemented a Database on MCU Flash

Sari, Iran

GAAM ELECTRIC - WELDING & CUTTING EQUIPMENT

2012

- Save and load lots of parameters with its own attributes with ease.

### Developed and Implemented USB HID Bootloader on PIC32MX460F512L

Sari, Iran

GAAM ELECTRIC - WELDING & CUTTING EQUIPMENT

2012

### Design and Development of Welding Machine Control Panel

Semnan, Iran

GAAM ELECTRIC - WELDING & CUTTING EQUIPMENT

2011

- PIC18 series as a core processor.
- 128x64 GLCD

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

Semnan, Iran

PERSONAL

2010

- Atmel AVR Atmega8 as a core processor.
- Ultrasonic.
- LPT communication to computer.
- Use of MATLAB for data analysis.

### Work with a Fingerprint Sensor

Behshahr, Iran

PERSONAL

2009

- Transfer data on RS232 protocol.

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

Behshahr, Iran

BEHPAK INDUSTRIAL CO.

2009