Seyed Jalal Hosseini

Personal Data

Place and Date of Birth:	Tehran, Iran | 1st March 1987
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Summary

An **Embedded System Engineer** with expertize in hardware design and software development. Experienced in Linux, RTOSs and low-level programming in C and Assembly, with comprehensive knowlodge in high-level enterprise software development, OOP, TDD and Open-Source solutions and hands on experience in front-end development, familiar with Javascript, HTML and CSS. Provides end-to-end solutions from HW prototyping to SW implementation.

Education

March 2016 — **M.Sc** in Telecommunication Engineering, **Universiy of Bologna**, Bologna
Thesis: "Software-Defined Wireless Sensor Networks"
Advisor: Prof. Chiara Burrati | GPA: 100/110

Fall 2010 — **B.Sc** in Telecommunication and Electronics Engineering, **University of Zanjan**, Zanjan
Thesis: "Controlling Robotic Arm with Human's arm motion"

Work Experience

2012
2011
Technical Consultant at Shahid Rajaee Port Complex
Technical Consultant Engineer in Telecommunication and Electronic Equipment Office
- Consulting on supplying equipments and spare parts
- Equipment maintenance, consultant and inspector

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Technical Consultant at Shahid Rajaee Port Complex
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Technical Skills

Programming Languages: Java, c++, c, c#, Assembly (arm), php, Javascript, html, css

- **Full-Stack Developer** with high expertise in backend technologies
- Complete knowledge of **Object Oriented Programming** and **Design Patterns**

- Understanding of **Unit Testing**, **Source Control** and **Documentation**
- Familiar with **Relational Database**, **MySQL**, **SQL Server** and **ORM** frameworks

Operating Systems: Windows, Max OSx, Linux, Embedded OS and RTOS: μC/OS, freeRTOS

- Skilled in Linux Command Line and Bash scripting
- Virtualization: **Vagrant, VMWare, qemu**
- Source Control Management: **git**
- Server Administration: **apache, nginx, mysql**
- Understanding of **signals, filesystems,** and **system calls**

Embedded Systems: ARM, AVR, PIC, Single Board Computers

- 8-bit Microcontroller **AVR** megaAVR and XMEGA, **PIC** PIC12 and PIC16
- 32-bit Microcontroller **ARM** ARMv6-M, ARMv7-M, skilled in **Assembly** language
- Software solution based on Linux Distribution on SBCs, experience in **raspberry pi, Beagle Bone, mini2440**

Simulation and CAD: Altium Designer, Proteus, Vivado, OrCAD, Modelsim, VHDL

- End-to-end Embedded Systems design from **PCB** to **Test** and **Verification**
- Skilled in Multilayer **PCB** design using **Altium Designer**
- Advance **Microcontroller** simulation with **Proteus**
- Familiar with **FPGA** design process: **VHDL**,**Vivado**, **Xilinx** Spartan-6

PROJECTS

Title **Software-Defined Wireless Sensor Networking (SDWSN)**

Description This project brings **Software-Defined Networking (SDN)** concepts in to **Wireless Sensor Networks (WSNs)**. A **Client-Server** model connects each separated WSN to a centralized **Centralized Controller** located in Server. The Client-Server communication happens via **REST** APIs. A **Single Page Application (SPA)** written in javascript (Angularjs) is in charge of monitoring the whole network.

Significance
- Highly modular and loosely coupled design.
- Clean and robust code; more than 200 unit tests with code coverage up to 80 percent

Title KAIVAN:**Equipment Maintenance Software**

Description KAIVAN is a small and easy to use **Computerized Maintenance Management System (CMMS)** written with **Excel** and **VBA**. I developed this software for *Fidar Saze Co* and it is still in use at *Asaluyeh* in Oil Platforms.

Significance
- Easy to use with familiar Excel environment

A comprehensive GUI written in VBA

Title **Robotic Arm Motion Controll with Human Arm**

Description A **Servo** robotic arm which is controlled by special developed sensor attached to human arm. The embedded system utilizes an ARM Cortex-M3 board running uC/OS-II an sophisticated control algorithms.

Significance
- Real-Time task scheduler with uC/OS

Languages

Farsi (Persian):	Native
English:	Fluent, | IELTS (2012) Overall:6

Interests and Activities

Technology, Open-Source, Programming
Music, Travelling