

# Seyed Jalal Hosseini

## PERSONAL DATA

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PLACE AND DATE OF BIRTH: Tehran, Iran | 1st March 1987  
ADDRESS: Via D'Azeglio 23, 40123, Bologna, Italy  
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## SUMMARY

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An **Embedded System Engineer** with expertise in hardware design and software development. Experienced in Linux, RTOSs and low-level programming in C and Assembly, with comprehensive knowledge 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

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MARCH 2016	<b>M.Sc in TELECOMMUNICATION ENGINEERING, University of Bologna, Bologna</b> Thesis: "Software-Defined Wireless Sensor Networks" Advisor: Prof. Chiara BURRATI   GPA: 100/110
FALL 2010	<b>B.Sc in TELECOMMUNICATION AND ELECTRONICS ENGINEERING, University of Zanjan, Zanjan</b> Thesis: "Controlling Robotic Arm with Human's arm motion"

## WORK EXPERIENCE

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2012 2011	Technical Consultant at SHAHID RAJAEI PORT COMPLEX <i>Technical Consultant Engineer in Telecommunication and Electronic Equipment Office</i> <ul style="list-style-type: none"><li>• Consulting on supplying equipments and spare parts</li><li>• Equipment maintenance, consultant and inspector</li></ul>
2012 2011	Technical Consultant at SHAHID RAJAEI PORT COMPLEX <i>Technical Consultant Engineer in Telecommunication and Electronic Equipment Office</i> <ul style="list-style-type: none"><li>• Consulting on supplying equipments and spare parts</li><li>• Equipment maintenance, consultant and inspector</li></ul>

## TECHNICAL SKILLS

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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**

	<ul style="list-style-type: none"> <li>• Understanding of <b>Unit Testing</b>, <b>Source Control</b> and <b>Documentation</b></li> <li>• Familiar with <b>Relational Database</b>, <b>MySQL</b>, <b>SQL Server</b> and <b>ORM</b> frameworks</li> </ul>
Operating Systems:	<p>Windows, Max OSX, Linux, Embedded OS and RTOS: <math>\mu</math>C/OS, freeRTOS</p> <ul style="list-style-type: none"> <li>• Skilled in Linux Command Line and Bash scripting</li> <li>• Virtualization: <b>Vagrant</b>, <b>VMWare</b>, <b>qemu</b></li> <li>• Source Control Management: <b>git</b></li> <li>• Server Administration: <b>apache</b>, <b>nginx</b>, <b>mysql</b></li> <li>• Understanding of <b>signals</b>, <b>filesystems</b>, and <b>system calls</b></li> </ul>
Embedded Systems:	<p>ARM, AVR, PIC, Single Board Computers</p> <ul style="list-style-type: none"> <li>• 8-bit Microcontroller <b>AVR</b> megaAVR and XMEGA, <b>PIC</b> PIC12 and PIC16</li> <li>• 32-bit Microcontroller <b>ARM</b> ARMv6-M, ARMv7-M, skilled in <b>Assembly</b> language</li> <li>• Software solution based on Linux Distribution on SBCs, experience in <b>raspberry pi</b>, <b>Beagle Bone</b>, <b>mini2440</b></li> </ul>
Simulation and CAD:	<p>Altium Designer, Proteus, Vivado, OrCAD, Modelsim, VHDL</p> <ul style="list-style-type: none"> <li>• End-to-end Embedded Systems design from <b>PCB</b> to <b>Test</b> and <b>Verification</b></li> <li>• Skilled in Multilayer <b>PCB</b> design using <b>Altium Designer</b></li> <li>• Advance <b>Microcontroller</b> simulation with <b>Proteus</b></li> <li>• Familiar with <b>FPGA</b> design process: <b>VHDL</b>, <b>Vivado</b>, <b>Xilinx Spartan-6</b></li> </ul>

## PROJECTS

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Title	<b>Software-Defined Wireless Sensor Networking (SDWSN)</b>
Description	This project brings <b>Software-Defined Networking (SDN)</b> concepts in to <b>Wireless Sensor Networks (WSNs)</b> . A <b>Client-Server</b> model connects each separated WSN to a centralized <b>Centralized Controller</b> located in Server. The Client-Server communication happens via <b>REST APIs</b> . A <b>Single Page Application (SPA)</b> written in javascript (Angularjs) is in charge of monitoring the whole network.
Significance	<ul style="list-style-type: none"> <li>• Highly modular and loosely coupled design.</li> <li>• Clean and robust code; more than 200 unit tests with code coverage up to 80 percent</li> </ul>
Title	<b>KAIVAN:Equipment Maintenance Software</b>
Description	KAIVAN is a small and easy to use <b>Computerized Maintenance Management System (CMMS)</b> written with <b>Excel</b> and <b>VBA</b> . I developed this software for <i>Fidar Saze Co</i> and it is still in use at <i>Asaluyeh</i> in Oil Platforms.
Significance	<ul style="list-style-type: none"> <li>• Easy to use with familiar Excel environment</li> <li>• A comprehensive GUI written in VBA</li> </ul>
Title	<b>Robotic Arm Motion Controll with Human Arm</b>
Description	A <b>Servo</b> robotic arm which is controlled by special developed sensor attached to human arm. The embedded system utilizes an ARM Cortex-M3 board running <b>uC/OS-II</b> an sophisticated control algorithms.
Significance	<ul style="list-style-type: none"> <li>• Real-Time task scheduler with <b>uC/OS</b></li> </ul>

## LANGUAGES

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FARSI (PERSIAN): Native  
ENGLISH: Fluent, | IELTS (2012) Overall:6

## INTERESTS AND ACTIVITIES

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Technology, Open-Source, Programming  
Music, Travelling