FREDY MONCADA ALANYA

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I am an enthusiastic MEng Electronic Engineer with two years of experience in industry, who learn and adapt quickly offering well-developed programming and electronics skills with an outstanding communications, organization, and problem solving skills as well as a good team player, seeking an opportunity to continue my career development growth in the Engineering industry.

1. KEY TECHNICAL / ENGINEERING SKILLS

- Well-developed working experience in Embedded *C*.
- Some experience of *C++, C#,* and basic knowledge of *Python, VHDL*, and *MATLAB*.
- Experience with Microcontroller, (*PIC32,* and ARM Cortex based *MSP430, STM32*).
- QT5 IDE, MS Visual Studio, MPLAB X IDE, Arduino IDE, Eclipse.
- Experience with GIT, Sub-versioning.
- Communication protocols (*CAN, I2C, SPI, USART, and USB*).
- Some experience with Networking Protocols (*TCP/IP, UDP*).
- Experience with Real time operating systems (*FreeRTOS*).
- Experience with development tools (such as compilers, emulators/JTAG, and debuggers).
- Some Linux experience on microprocessors single board such as Raspberry Pi.
- Sufficient understanding of electronics to design and debug hardware firmware interface.
- Experience with the use of test equipment such as logic analysers, serial data analysers, oscilloscopes.
- Experience in Agile development methodologies (*JIRA*).

2. PROFESSIONAL PROFILE

Software Engineer, Topcon technologies, Minchinhampton, UK
April 2017 – Present

- Working experience in automation and motion control application systems for agricultural as well as for industrial machinery.
- Low and top level design and implementation of peripheral drivers on various microcontrollers.
- Implementation of CAN, SPI, I2C and USART protocols allowing communication between own manufactured modules to third party devices (Machine control systems). Also, interaction with a broad range of sensors such as proximity, ultrasonic, gyroscope, accelerometer, pressure, force, and temperature.
- Implementation of motor control as well as transducers. (Timers, Input capture, output compare, PWM, ADC).
- Data storage using external EEPROM, and USB.
- Developing of new ECUs (Control Unit) with WIFi and Bluetooth capabilities using Harmony Integrated Software Framework. Implementing sockets and networking stack for TCP/IP and UDP on PIC32MX Microcontroller.
- PC application written in C# for testing peripheral applications.
- Active contribution to improve existing mature software application processes.
- Debugging, maintaining, developing and fixing bug.

Junior Firmware Engineer, Mecmesin Ltd, Slinfold, UK
Aug 2016 – Dec 2016

- Design, develop and test firmware in C, as well as identifying and fixing bugs, on MSP430 Microcontroller.
- Peripheral Driver Development and ensuring back-up of the software development.
- Writing documentation to keep progress in track.
- Design of PC applications, for testing serial communication and general GPIOs.
- This role required high organisational, planning skill as well as self-motivation to be able to meet individual as well as team targets.

Appointments Officer and Clinic Coordinator, Royal Sussex County Hospital, Brighton, UK
Jan 2008 – Jul 2016

- Booking appointments on the Hospital software system. Also, answering general enquiries, face to face, by email, or by phone, ensuring a high level of customer service. Role was fast-paced and required to act quickly on a daily basis. Required strong communication and organisational skills to liaise and coordinate with busy doctors, secretaries and hospital managers. Also, gaining an in-depth knowledge of the hospital environment and its multiple software systems, and procedures in a short space of time.

Managerial and customer services (UK and Peru)

Jan 1999 – Dec 2007

- I held a variety of positions whilst studying. These roles developed my communication skills and allowed me to take responsibility for a variety of tasks**.** These roles demanded high level of own initiative, responsibility and commitment.

  Jun 2007 – Dec 2007 Assistant Bar Manager, and Bar Supervisor, HBJ – Quality Hotel Brighton (UK).

  Oct 2005 – May 2007 Bar Manager, Pepe Zeta (Peru).

  Sep 2003 – Sep 2005 Bar Manager, Blue Martini (Peru).

  July 2002 – Aug 2003 Manager, Daisy Tours Travel Agency (Peru).

  July 2001 – Jun 2002 Bar Manager, Valle Sagrado Hotel (Peru).

  Jan 1999 – Jun 2001 Assistant bar manager, Cross keys (Peru).

3. **ACADEMIC PROFILE**

MEng Electronics Engineering (achieved 1:1) - University of Sussex, UK

19/09/2011 – 17/07/2015

My University experience made me fully aware of the future demands in the technology industry and provided to me the confident and technical knowledge to be able to cope with the high standards that the engineering industry will expects from me.

Key Modules:

- Further Mathematics.
- Programming.
- Embedded Systems.
- Circuits and Electronics.
- Microcontrollers.
- High Level IC Design.
- Computer Systems Engineering.
- Advanced Networks.
- Digital Communications.
- Digital Systems and Microprocessor.
- *MEng Group Project* - Own prototype autonomous indoor (USAR) Search and Rescue robot vehicle.

AdTech, London (one day course)

21/06/2011

- Intensive training course in Helios IQ web advertising programme.

Institute Tecsup, Lima, Peru (6 months online course)

09/02/2010 – 24/08/2010

- Peruvian certificate of PHP, HTML and CSS programming course completed. The course was based on web applications, encryption and MySQL data base.

Institute SENATI, Cusco, Peru (4 months course)

3/10/2006 – 23/02/2007

- Peruvian certificate web design course completed, using different tools and techniques combined with the Multimedia Macromedia software such as Dreamweaver, Flash and Firework.

Americana Institute, Cusco, Peru (8 months course)

4/04/ 2006 – 11/12/2006

- Peruvian certificate in Management course completed. As part of this course I was guided to develop marketing research and strategy, market planning and control.

Unversidad San Antonio Abad, Cusco, Peru (A level equivalent)

25/08/1997 – 29/01/1999

- Physics, Mathematics, Further Mathematics and Chemistry, I learnt the basic and more complex model of science.

Foundation programme CEPRE - Universidad San Antonio Abad, Cusco, Peru (A level)

07/04/1997 – 01/08/1997

- Studied core modules and subjects such as Mathematics, Statistics, Physics, Computing and Chemistry.

4. **ADDITIONAL SKILLS**

- Spanish – Mother language.
- Self-awareness of my achievement, abilities and weaknesses.
- Lifelong Learning.
- Integrity.
- Independent.

5. **HOBBIES / PERSONAL PROJECTS**

- I used HTML and PHP to developed websites with security encrypted login, and including some animation using Flash and Macromedia connection to a local database MySQL.
- Also I joined some fund raising activities and I enjoy doing sports to keep my spirit's motivation high.

6. **REFERENCES**

Available on request