**Reza Amani** Pakuranga heights, Auckland 2010

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Summary

A SW/HW engineer with experience in a variety of positions and fields, including embedded hardware/software implementation, system architecture, DSP, test and debug with a great track record of accomplishing projects within limited budget and time.

Technical skills

* Microcontroller hardware and software
* Analogue, digital and mixed systems
* system architecture
* Ability to translate user requirements into technical solutions
* Predict future problems and providing best solutions during design stage
* Designing and implementing test jigs
* Safety-critical programming, fault trees, IEC and AS/NZ safety standards

Software

* C, C++ and assembly
* Embedded programming within limitations
* Real-time test and debug
* Python
* Developing peripheral drivers
* Agile methodology, Scrum
* TDD, unit testing
* Version control software; SmartGit, Gitlab
* Familiar with Jira, ProjectPlace, …
* Familiar with RTOS
* GCC, MakeFile, Common IDE’s, Eclipse, Keil
* Serial and wireless communication standards like RS485, RS232 and Bluetooth
* BLE programming, SiLab and Nordic
* Different design patterns
* DSP algorithms

Analog

* Analog circuits; design and debug
* EMC and EMI
* Schematic and PCB
* DC/DC converters and battery management
* Analogue circuits simulation with LTSpice

Soft Skills

**Problem solver:** Actively seeking and resolving technical and operational problems.

**Teamwork:** Extensive experience in team projects at different levels including small team leadership.

**Supporter:** Eager to mentor colleagues and help them to debug their works.

**Hands-on Engineer:** Involving closely and directly in all tasks of projects.

**Time management:** committed to do the job in time with prioritising tasks and a fast pace

Attributes

* Action-oriented
* Co-operative
* Detail-oriented
* Tolerant
* Can-do attitude
* Creative

Experience

**Senior Embedded SW engineer** 2015-now

**Tru-test group, Auckland office**

Responsibilities:

* Embedded software programmer for a state-of-the-art energizer
* Signal processing; real-time pulse processing
* BLE/Bluetooth connectivity
* Ensuring compliance with safety standards; IEC,AS/NZ, EN
* Design architecture, HW design and SW implementation for independent safety module
* Working on legacy codes, debugging and improving
* Code reviewing
* Investigating development tools, to help selection of platform for future projects
* Supervising junior members

Achievements:

* Configuring Bluetooth Low Energy in advanced modes, e.g. master/slave simultaneously
* Suggested a new mixed SW/HW idea for safety module to reduce TMC and TTM
* Designed new signal processing method that enabled us to perform in-pulse calculations
* Provided ideas to increase software development pace
* Improved the cooperation between HW and SW team by a common understanding
* 3 times titled as “Engineer of the month”

**Embedded designer, system architecture, Analogue designer** 2005-2015

**Pardazesh Basamad Ltd.**

An agile, small size, high-tech Company performing high-level R&D projects

Responsibilities:

* HW and SW designing for DSP systems, SDR platforms
* Simulating
* Designing mixed systems (HW&SW); schematic and PCB
* Programming embedded systems with C
* Choosing and setting up platforms; ARM, PIC and AVR microcontrollers, Piccolo and floating point DSP’s
* Technical negotiating with the costumer, providing solution and choosing platform
* Proof-of-Principle, Form Study and/or functional prototyping
* Implementing battery management functions in hand-held products

Achievements:

* Reverse-engineering for an old under-water wireless communication system, in order to improve it for new requirements
* Designed and implemented a secure FH-SS video down-link for UAV’s
* Developed a low-cost reliable embedded system to control chemical and pharmaceutical manufacturing systems with complicated processes

**Digital electronics engineer, Driver/Firmware developer** 2002-2005

**Basamad Negar Ltd.**

Developer of laboratory and broadcast products

Responsibilities:

* Digital hardware designing; schematic and PCB
* Developing peripheral drivers for DSP and microcontroller in C and assembly
* Designing signal processing algorithms
* Proof-of-Principle, Form Study and/or functional prototyping
* Planning and teaching costumers training courses

Achievements:

* Reached the record of 100MS/s sampling rate and 13.5 ENOB with an acquisition board

Education

**M.Sc. in Digital Electronics Engineering**

**Sharif University of Technology**

Thesis: Debugging method for parallel-processing DSP systems

Implemented on a platform consisting 4 floating-point digital-signal-processors

**B.Sc. in Electronics Engineering**

**Sharif University of Technology**

Final project: Implementing a narrowband FSK transceiver

Controlled and used by a MCS-51 microcontroller

Computer Skills

Altium/ Protel 99SE Microsoft office

Code Vision, Keil uvision, Eclipse, AVR studio AWR (RF simulation)

GCC, MakeFile Microsoft Visual Studio

Jira, Gitlab, Git, version control systems Simplicity Studio, SEGGER embedded IDE

Awards

3 silver medals from physics, mathematics and computer students Olympiads, 1993

2nd place in university scientific competitions among 150 students, 1998

8th place in national electrical/electronic engineering Olympiad, 2000

Outside interests

Chess (Arena Fide master, Howick club team member) Team sports, volleyball

Physics Classical music

Psychology Travelling

Referees

Available on request\*