**Reza Amani** Pakuranga heights, Auckland 2010

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Summary

Electronics engineer with more than 10 years’ experience in a variety of positions and fields, including embedded hardware/software implementation, DSP engineer, system architecture, test and debug with a great track record of accomplishing projects within limited budget and time.

Technical skills

* Microcontroller hardware and software
* Digital signal processors; hardware design
* Safety-critical SW implementation
* C, C++ and assembly
* Embedded programming within limitations
* Developing peripheral drivers
* Test and debug
* Agile methodology, Scrum
* TDD, unit testing
* EMC and EMI
* system design
* Predict future problems and providing best solutions during design stage
* Serial and wireless communication standards
* Analogue, digital and mixed systems design
* Schematic and PCB
* Developing communication protocols
* Developing embedded apps under Linux

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.

**Independent:** Able to work without being supervised; with preference for handle barriers in person.

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

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

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

Attributes

* Action-oriented
* Co-operative
* Decisive
* Open-minded
* Detail-oriented
* Tolerant
* Can-do attitude
* Creative
* Calm
* Logical thinker

Experience

**R&D engineer** 2015-now

**Tru-test group, Auckland office**

Responsibilities:

* Embedded software programmer for a state-of-the-art energiser
* Signal processing; high-speed real-time pulse processing
* Ensuring compliance with safety standards; IEC,AS/NZ, EN
* Gathering data from field tests, simulating real data in lab
* Design architecture, HW design and SW implementation for independent safety module
* Working on legacy codes, debugging and improving
* Code reviewing

Achievements:

* Suggesting a new mixed SW/HW idea for safety module that reduced TMC by 60% and time-to-market by 4 months
* Designing new signal processing method that enabled us to perform in-pulse calculations
* Providing ideas to increase development pace
* Establishing a new development/build process for firmware to integrate debugging tools

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

**Pardazesh Basamad Ltd.**

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

Responsibilities:

* HW and SW designing for DSP systems, SDR platforms
* Designing hardware of digital systems; schematic and PCB
* Programming embedded systems with C
* Developing GUI for control applications with visual C#
* Performing some mechanical calculations and interfacing electronic concepts with mechanical requirements
* Choosing and setting up platforms; ARM, PIC and AVR microcontrollers, Piccolo and floating point DSP’s
* Negotiate with the costumer, providing solution and choosing platform
* Making technical reports and delivering
* Proof-of-Principle, Form Study and/or functional prototyping
* Replacing RS-232 and RS-485 communication with ISM-band wireless modules in some old control systems
* Designing, implementing and testing to meet military environment requirements
* Working on legacy codes, debugging and improving

Achievements:

* Reverse-engineering for an old under-water communication system, in order to improve it for new requirements
* Proposing an under-ground communication system based on seismic signal processing
* Introduced a new idea of combining MAC and PHY layers in a frequency-hopping Ad-Hoc radio with a state-of-the-art robust routing algorithm
* Developed a low-cost reliable embedded system to control chemical and pharmaceutical manufacturing systems with complicated processes
* Eye-catching records of budget and delivery time for 4 embedded control projects
* Developed an automatic system to test digital cards of up to 80 I/O’s
* Proposed and developed an innovative FH wireless link for remote-controlling a UAV, robust against interference, interception and jamming
* Successfully managed to develop a military product following some of “Mil-std-810A” and “Mil-std-810G part two” rules and methods

**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
* Implementing simple GUI’s with visual C++ 6.0
* Designing signal processing algorithms
* Designing and testing analogue interfaces and high precision circuits
* Proof-of-Principle, Form Study and/or functional prototyping
* Planning and teaching costumers training courses

Achievements:

* Break the record of 100MS/s sampling rate and 13.5 ENOB with an acquisition board
* power supply tuning and protection, controlling battery charging process with DSP
* Cut the hardware cost of future projects by 80% suggesting and developing a general purpose SDR platform

**Signal processing group member** 2000-2002

**Professor Hesabi organization (NGO)**

A scientific and research non-governmental organization

Responsibilities:

* PCB design, montage, primary tests
* Developing DSP drivers with assembly
* System test and evaluating

Achievement:

* Part of team succeed to develop a portable battery-powered Active-noise-controller

Education

**M.Sc. in Digital Electronics Engineering 2000**

**Sharif University of Technology**

Thesis: Debugging method for parallel-processing DSP systems

Implemented in a platform consisting 4 microprocessors

**B.Sc. in Electronics Engineering 1998**

**Sharif University of Technology**

Final project: Implementing a narrowband FSK transceiver

Controlled and used by a MCS-51 microcontroller

Computer Skills

Microsoft Visual C#

Microsoft Visual C++

TI code composer (TI digital-signal-controllers programming and debugging)

Visual-DSP (Analog devices DSP’s IDE)

Code Vision (AVR microcontrollers programming and debugging)

Keil uvision (ARM microcontrollers programming)

Microsoft Visual Studio (.NET 2013)

Xilinx ISE

Analog Devices simulation programs

Jira, Gitlab, Git, version control systems

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 (Fide Rating: 1624, North shore club team member) Team sports

Hiking Classical music

Psychology Travelling

Referees

Available on request\*