**Reza Amani** Pakuranga heights, Auckland 2010

Mobile: 0223688977

Email: reza.amani@gmail.com

https://www.linkedin.com/in/rezaamani

Summary

Electronics engineer with 17 years’ experience in a variety of positions and fields, including embedded hardware/software implementation, RF engineering, 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
* RF design; RFIC’s
* RF amplifiers, filters, synthesizers, etc.
* Wireless sensor network
* Analog Devices solutions for sub-GHz short-range wireless communication
* DSP, SDR, implementing communication algorithms by DSP’s
* signal processing
* C, C++ and assembly
* Python
* Visual C# and C++
* Developing peripheral drivers
* Driving external data-acquisition parts and measuring technical parameters
* Version control software; SmartGit, Gitlab
* Power supplies, filters, signal shaping
* Noise challenges in mixed systems
* Schematic and PCB
* Developing communication protocols
* Ability to translate user requirements into technical solutions
* Serial and wireless communication standards like RS485, RS232 and ZigBee

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 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

Experience

**R&D engineer** 2015-now

**Tru-test group, Auckland office**

Responsibilities:

* Embedded software programmer
* Signal processing; real-time pulse processing
* HW/SW design for 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:

* Suggested ideas for designing safety module and actively contributed to design discussions
* Redesigned 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 sprint”
* Involved in fixing mixed HW/SW bugs and cooperated in catching some HW issues

**Embedded designer, system architecture, RF designer, 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
* Designing RF modules using MMIC’s
* Designing mixed systems (HW&SW); schematic and PCB
* Programming embedded systems with C
* Designing WSN systems; High level
* Choosing and setting up platforms; ARM, PIC and AVR microcontrollers, Piccolo and floating point DSP’s
* Designing and implementing serial protocols for wireless projects
* Technical negotiating with the costumer, providing solution and choosing platform
* 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
* Implementing battery management functions in hand-held products

Achievements:

* Designed and implemented a high-tech AD-HOC FH-SS handheld wireless radio, using TI DSP’s and Analog Devices ISM-band transceiver modules
* Designed and implemented a secure FH-SS video down-link for UAV’s
* 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
* Suggesting a new communication system in a parking management/guidance system, led to wiring costs being halved; using WSN, Ad-Hoc and short-range-wireless technologies

**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
* Designing and testing analogue interfaces and high precision circuits
* Planning and teaching costumers training courses

Achievements:

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

* As a team member, managed to develop a portable battery-powered DSP-based ANC (Active noise controller)

Education

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

**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 1998**

**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

Keil uvision Microsoft C#

TI code composer, Visual DSP Microsoft VC++

Xilinx ISE Analog Devices simulation programs

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

Team viewer (remote teaching and controlling) Microsoft Visual Studio (.NET 2013)

Jira, Gitlab, Git, version control systems ProjectPlace

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, Howick club team member) Team sports, volleyball

Physics Classical music

Psychology Travelling

Referees

Available on request\*