**Reza Amani**

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Career objective

Currently seeking a challenging opportunity in different fields and positions of electronics engineering from PCB design to system design, that will utilise my extensive skills gathered during more than 10 years of experience in different levels, including analog circuit design, testing and debugging.

Technical skills

* analog, digital and mixed systems
* Microcontroller hardware and software
* signal processing
* Power supplies
* C, C++ and assembly
* Test and debug
* Planning and performing test and evaluation routines
* Visual C#
* EMC and EMI
* Designing RF modules by MMIC’s
* Simulating RF blocks by AWR
* Designing, simulating and evaluating RF modules
* Industrial systems installation
* Installing industrial equipment such as ultrasonic bath, pumps, valves, motors and sensors
* Fault detection and recovery
* system design
* Training customers and writing manuals
* Ability to translate user needs into technical solutions
* Predict future problems and providing best solutions during design stage

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.

**Computer:** Working with basic programs such as Microsoft Project, Word, Excel and PowerPoint.

**Time management:** committed to do the job in time with scheduling tasks cleverly, working with higher energy or even over-working.

**Language skills:** Writing concisely, excellent at reading especially technical texts.

**Documentation:** Excellent at reading and making technical reports, manuals, troubleshooters, etc.

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

Attributes

* Action-oriented
* Co-operative
* Decisive
* Open-minded
* Organised
* Perfectionist
* Detail-oriented
* Tolerant
* Can-do attitude
* Willing to learn, quick to pick up new skills
* Creative
* Calm
* Logical thinker
* Seeking out new responsibilities regardless of reward

Experience

**Embedded designer, RF designer, Project manager** 2005-2014

**Pardazesh Basamad Ltd.**

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

Responsibilities:

* 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 mechanic requirements
* Negotiate with the costumer, providing solution and choosing platform
* Making technical reports and delivering
* Designing RF modules using MMIC’s
* Simulating RF blocks using AWR
* Installing industrial equipment such as ultrasonic bath, pumps, valves, motors and sensors
* Interfacing Industrial elements with control system including SSR, speed controller, PT100 sensors, electronic eyes and encoders
* Professional testing and evaluating radio systems
* Planning and teaching costumers training courses

Achievements:

* Suggesting a new communication system in a parking management/guidance system, led to wiring costs being halved
* Designed and implemented a parking management/guidance system in half price of available systems using WSN, Ad-Hoc and wireless technologies to eliminate wiring costs
* 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 and 2 telecommunication projects

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

**Basamad Negar Ltd.**

Developer of laboratory and broadcast products

Responsibilities:

* Digital hardware designer; schematic and PCB
* Developing peripheral drivers for DSP and microcontroller in C and assembly
* 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
* 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 NGO

Responsibilities:

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

Achievement:

* Part of team succeed to research and develop a portable battery-powered ANC

Education

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

**Sharif University of Technology**

Thesis: Debugging method for parallel-processing DSP systems

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

**Sharif University of Technology**

Final project: Implementing a narrowband FSK transceiver

Computer Skills

Altium/DXP/Protel 99SE Microsoft office

Keil uvision Microsoft C#

TI code composer Microsoft VC++

Xilinx ISE Analog Devices simulation programs

Code Vision AWR (RF simulation)

Team viewer (remote teaching and controlling)

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 (international rated player, Fide Rating: 1624) Team sports

Tramping Classical music

Psychology Travelling

Referees

Available on request

Familiar with Frequency hopping, DSSS, Ad Hoc, RF filters, Micro-strip design, DVB, audio watermarking, underwater (acoustic) communication, general concepts of data communication via magnetic field

**Capable of performing almost all tasks of electronics projects; including schematic and PCB design, montage, test and debug, production, PC and embedded programming, system design and project management**

* Parking Management/Guidance system

ARM-based smart parking system using wireless and WSN Ad-hoc technologies to control and manage parking and guide incoming cars to nearest empty space, including LED-panels, ultrasonic sensors, wireless links

* Cutting and packing system automation

DSC-based control of a medical packing system using step-motors, SSR, speed controller, PT100 sensors, electronic eyes and encoders, based on Texas Instruments Digital-signal-controllers

* Chemical production line automation

PC-based control of a chemical catalyst production line using different industrial sensors and actuators including ultra-sonic chamber, solenoid valve, fan, heater, pump

* Pharmaceutical coating system automation

Embedded control of a coating system using AC motor, servo-motor, step-motor, SSR and a variety of industrial sensors, based on ARM microcontrollers

* Spectrum monitoring system (VHF, UHF)

Wideband monitoring system capable of searching RF spectrum, intercepting and demodulating analog signals

* Wide band VHF/UHF multi-modulation data/voice transceiver

Multi-band, multi-modulation walkie-talkie design and implementation consisting of RF section (amplifiers, power detector, synthesizer, switches and filters) and Process section (A/D, D/A, DSP, implementing different wireless algorithms)

**Miscellaneous** **projects**

* Designing a general purpose control system based on microcontrollers for controlling temperature and humidity of food products warehouse

A reliable system able to run complicated algorithms for healing and curing fruits without needing a supervisor, using 4-20mA standard parts

* Designing a 2kW power supply

Using push-pull topology, I implemented an AC-DC power supply with 10 different outputs at various rates of voltage and current. The product is much smaller than similar systems and benefits from higher efficiency.

* Implementing several telephony algorithms including ADPCM, CALLER-ID FSK and DTMF on an embedded system based on TMS320VC5509

I managed to integrate all audio processing functions in a small USB-powered box. It reduced production costs down to 50% in comparison with a china-made competitor.

* Designing hardware, implementing peripheral driver and signal processing program in C and assembly language in several small projects based on TMS320F28335, TMS320VC5XXX, ADSP2XXX and microcontrollers