**[Real Time Software Development](https://www.postjobfree.com/resume/adzizh/real-time-software-richardson-tx)**

**Location:**Richardson, TX

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**Resume:**

JAGAN AMBATI

Resume Title: Software Developer

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Experience Summary

• Work within IoT segment of IoT Solutions team to define integrated solutions (hardware and software) addressing IoT market connectivity, security, and reliability challenges.

• Work with Solution Integrators to develop proof of concepts and R&D teams to productize solutions.

• Experience in design, development, coding, in the field of Embedded systems, with strong Analytical skills and a broad range of computer experiences.

• Research, build, test, and document state-of-the-art IoT solutions with integrated electronics and firmware development.

Experience in Details

Employer: Zillion Technologies Inc, USA

Role: Software Developer July2022-Till Date

• Work within IoT segment of IoT Solutions team to define integrated solutions (hardware and software) addressing IoT market connectivity, security, and reliability challenges

• Design, coding, testing and integration of software for a real-time, multitasking DSP based receiver Producing efficient and elegant code based on requirements

• Testing and deploying programs and applications

• Troubleshooting, debugging, maintaining and improving existing software.

• Identifying areas for modification in existing programs and subsequently developing these modifications

• Writing and implementing efficient code

• Deploying software tools, processes, and metrics

• Maintaining and upgrading existing systems

• Creating Jig for Testing and Programing the Hardware to automate and stream line the production using tools like Github, ESP-IDF, python, Python, OpenLinux, cadence PCB tools

Employer : Alcobrake Pvt Ltd

Project: IOT for BAIID Oct 2015 - 5 June 2022

Role: Sr Embedded FW Engineer

• Building the BAIID with advanced features for driver convenience.

• Experience on Fleet management system.

• Interact with customers, gathering the requirements, implementing the use cases.

• Solving production and device installation issues.

• Working on 4G, Wifi, GPS, and Bluetooth Camera Interfacing with Web server.

• Creating Auto calibration unit for The BAIID, that makes easier for Dealer who services the device.

• Creating Jig for Testing and Programming the Hardware to automate and stream line the production.

• Leading the 6 member team, assigning tasks, tracking the bugs.

• Interfacing – Wifi, Bluetooth, SPI, I2C, UART and Sensor Data Management.

• Tools: ESP32, LPC2148, STM320F0, Github, ESP-IDF, python, FreeRTOS, OpenLinux, OrCAD tools.

Employer : Simplex Info Systems Inc .

Client : Alcobrake LLC,Dallas, Texas(Embedded system Engineer) Sep 2012 - Sep2015

Project: Breath alcohol Ignition Interlock device(BAIID)

Role: Consultant

• Upgraded the existing product, it reduces cost reduction, by adding additional features, increased profit ( Alco2-Lock Series IV)

• Developed, testing Fuelcell Based BAIID, developed Interface protocol.

• Developing software for early hardware prototypes, creating and executing unit and integration tests.

• Implemented whole logic in state machine.

• Implemented Firmware code for ambient temperature, Pressure, breath temperature and Fuelcell Heating temperature and Fuelcell sensors.

• Implemented Firmware code for Solenoid and Fuelcell Heating operation.

• Implemented code for auto fuelcell Calibration check, and calibration adjustment.

• Implemented code for Admin module like Service period and violation lockout.

• Implemented code logging, saving and erasing data.

• Debugging software and hardware/software integration issues.

• Involved in integrating GPRS module to server, to log real time data and DMV can access at any time.

• Involved in integrating Camera with night vision to record the test event in server as well as in SD card.

• Implemented code Engine run detection based on OBD II interface.

• Wrote test plan, created test set up and testing at normal room temperature and at extreme temperature conditions.

• Fully involved in Getting (National Highway Transport Safety Authority) NHTSA certification.

• Develop product documentation for software applications including User's Guides, Design Descriptions, Configuration Guides and Test Procedures.

• Involved in EMI/EMC, ESD, Load Dump, Bulk current Injection and survival testing.

• Developed Auto Calibration and Auto Testing for this product, improved feature like configuring BAC levels from front panel.

• Tools: CWIDE, OrCAD, MC13213, LPC2146, JTAG, DSO, Environmental chamber;

• Language– C, C#.

Employer: Innovation Communications Systems Pvt.Ltd .

Client : Electronics Corporation of India Ltd. Hyderabad, India. May 2011 - Sep 2012

Project Frequency Division Multiplexing Signal Analyzer(FDMSA-VBDSA)

Role: Consultant

• Design, coding, testing and integration of software for a real-time, multitasking SOPC based receiver system. Involved in all phases of software development.

• Leading 3 member team, scheduling the project assigning tasks to team preparing requirement, design, test, technical user documents.

• Build PowerPC based system On Vertex5 FPGA.

• Implemented algorithms that carries out Spectral, Temporal and statistical Signal on input voice band signals and identify VFT, FSK Modem PSK/QAM Modem or FAX.

Implemented various digital modulation recognition and Demodulation algorithms and signal conditioning on real time software.

• Tools: MATLAB, Vertex FPGA PCI Beard, C,RTOS, ModelSim;

• Languages – C.

Employer : Simplex Info Systems Inc .

Client: Crane Aerospace, Burbank, CA Nav2010 –Feb 2011

Project: mcX(modular controller, Cabin seat system)

Role: consultant

• Understand the Power and Auxiliary IO requirements,

• Implemented safety algorithms in object orient concept and tested.

• Created framework interface, to foreground and background processes.

• Got exposure on CAN protocol and CAN analyzer.

• Safety critical software development (RTCA/DO-178B) and testing.

• Debug on Error handling, Event logging.

• Involved in Plan for Software Aspects of Certification.

• Verify, test and integrate module software for Motor Activator, Power supply and, Auxiliary Modules.

• Tools: Synergy, Code Red IDE tools and ARM cortex M3 micro controller;

• Language– C/C++.

Client: Nuon Inc, Phoenix, AZ (Embedded FPGA Engineer) July 2008 -Oct 2010

Project: iSCSI and TCP/IP offload Engine

Role: Consultant

• Design and Implemented TOE Interface with MAC and IP, ICMP, UDP, TCP.

• Working on design and iSCSI (internet Small Computer System Interface) offload Engine to get maximum through put, and prepared scheduling plan for iSCSI.

• Wrote device driver for Offload Engines like TCP/IP and iSCSI.

• Help to define overall software system design and architecture

• Tools –GNU tools, uClinux, busyBox, StratixII GX Development, SVN, analysis - Imagix tool.

• Languages: C.

Employer: Infotech Enterprises Ltd .

Client : Deuta Wreak GmbH, Germany (Team Lead) july 2006 - June 2008

Project : ModRec Simulator

Role: Team Lead

• Understand the whole system, from client documents

• Wrote proposal, Requirement document, and Design document.

• Lead 5 member team, schedule the tasks, to team.

• Designed, develop and integrate the Interface hardware for ModRec Simulator

• Stimulated the event recorder hardware inputs like analog, frequency, digital signals, simulates the artifacts and tests the ModRec Simulator for a specific configuration that the customer needs.

• Wrote Firmware device drivers in C code for Analog, Digital IO, CAN, MVB.

• Involving in developing GUI screen in LabVIEW, interfacing Digital and analog I/Os.

• Involved in the product is proposed to build with PCI data acquisition cards, necessary interface cards for simulation.

• Tools: COTS Boards, CAN, MVB, Mother Board, Windows XP, LabVIEW,

• Languages: C, Tcl/Tk.

Employer: Innovation Communications Systems Pvt.Ltd .

Client : Electronics Corporation of India Ltd. Hyderabad, India. Dec 2004-june 2006

Project Voice Band Data Signal Analyzer(VBDSA)

Role: Team Lead

• Design, coding, testing and integration of software for a real-time, multitasking DSP based receiver system. Involved in all phases of software development.

• Leading 3 member team, scheduling the project assigning tasks to team preparing requirement, design, test, technical user documents.

• Wrote Firmware device driver Digital down convertor.

• Implemented algorithms that carry out Spectral, Temporal and statistical Signal on input voice band signals and identify VFT, FSK Modem PSK/QAM Modem or FAX.

• Implemented various digital modulation recognition and Demodulation algorithms and signal conditioning on real time software.

• Tools: MATLAB, TS101 kit, OrCAD, GUI(VC++), RTOS;

• Languages – C.

Client: Electronics Corporation of India Ltd, Hyderabad, India, Dec 2003 - Oct 2004

Project: Spectrum Analyzer

Role: Team Lead

Write a Proposal to develop ’Spectrum Analyzer’ Module based on requirements and implemented, that accepts IF frequency 10.7MHz5MHz at -107dbm power levels.

• Leading 3 member team, scheduling the project assigning tasks to team preparing requirement, design, test, technical user documents.

• Design, coding, testing and integration of software for a real-time, multitasking DSP based receiver system. Involved in all phases of software development.

• Wrote Firmware code, device driver for ADC, PCI ands

Involved in Design and component selection, FFT, and testing and hardware debugging and prepared and send the boards for Environmental and EMI/EMC testing.

Tools: VDSP(Kernel), TS101, OrCAD, PCI-9030, USB.

Languages – C,

Client: Electronics Corporation India Limited, Hyderabad, India:

Project: Baseband Identification System(BIDS) Oct 2002 – Sep 2003

Role: Design Engineer

• Design, coding, testing and integration of software for a real-time, multitasking DSP based receiver system, Involved in all phases of software development.

• Leading 4 member team, scheduling the project assigning tasks to team, preparing requirement, design, test, technical user documents.

• Implemented analog digital modulation recognition and Demodulation algorithms and FIR Filtering.

• Involved in GUI(VC++) design of project on real time by Integrating DSP algorithms ADC, DDC, DAC, SPORT interface development and debugging .

• Tools: ADSP-2191, OrCAD, PCI-9030, USB;

• Languages – C.

Employer : HBL-NIFE Power systems Ltd. .

Client: ARDE India(Engineer) Oct 1998-Sep 2002

Project: Universal Variable Timer Fuse

Role: Team member

• The purpose of UVT is to burst the Fuse at a predetermined height.

• It works on RADAR principle, it transmits a signal of known frequency, and finds the beat frequency, based on this beat frequency the height is calculated and fire command is initiated. Used 128 Point FFT to Measure frequency.

• Wrote Assembly program for measuring frequency using FFT algorithm, tested with different frequency at input of signal generator.

• Wrote and tested firmware code Derive driver for ADC.

• Implemented LPC algorithm is used for the development of the system, designed FIR and IIR DSP digital filters and Linear LPC to encode/decode a speech signal in MATLAB and C..

• Tools: Analog Filters(Op-Amp), Code Composer StudioTMS320F241, XDS510PP.

• Language used– C, Assembly.

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Education: B.E (E.C.E) OSMANIA University, Hyderabad, A.P. INDIA

: Diploma (D.E.C.E)State Board of Technical Education and Training A.P. INDIA

: S.S.C (10th Class ) Board of Secondary Education) A.P. INDIA

Professional Training: Diploma in VLSI, Lab VIEW 8.0

Award: Outstanding team Performance at InfoTech Ent. Ltd.