Sunil Gattu

Programmer Analyst - Hallmark Global Technologies INC

Plano, TX - Email me on Indeed: indeed.com/r/Sunil-Gattu/6cd0a31dd79c5889

Seeking a position to utilize my skills and abilities, which offers professional growth, while being innovative and flexible. Aims to optimize on the skill and knowledge acquired to the fullest potential and contribute to the set goals. Believes that meticulous effort upheld by sheer commitment and hard work is the key to success.

Summary & Specialties:
15+ Year's experience in Application, Embedded Software design, development & testing.
• Worked on various areas like Embedded Linux, Device Drivers, Boot loader, File System & middle ware complex projects
• Worked on various IPC mechanisms, Network(socket) programming, Communication protocols, Multithreading and Linux internals
• Software development using C ,C++,Python on embedded Linux platform
• Software development using VC++ on windows operating system
• GUI development in QT.
Willing to relocate: Anywhere
Authorized to work in the US for any employer

WORK EXPERIENCE

Programmer Analyst

Hallmark Global Technologies INC - March 2014 to Present

As a programmer analyst, responsible for the design and development of a telecommunication probe that includes development in C++, Python under Linux.
Lead the design & development of a software team for a new blade that expands the storage capacity for the Geoblade. This includes interfacing with the HiGig 40G network and programming (L2, L3 layers, VLAN & trunk management) the BCM56860 chip using Broadcom sdk-6.5.3 API's. This work includes the development of L3 layer to support for IPv4 & IPv6.
Responsible for triaging the critical customer escalations in the probe base 40G network (Broadcom), IDL and platform related issues. Also involved in persistency storage algorithms to store GB's of incoming data to the storage units using twisted, fabric and redis.

Project #7: Security Computing Device
Tools: C++, Linux, Python, Device Drivers

Programmer Analyst

Hallmark Global Technologies INC - New York, NY - May 2012 to Present

Worked as Project Manager in L&T, India in the fields of Embedded Systems since December-2006 to April 2012
• Worked as Scientist/Engineer-SD in ISRO (Indian Space Research Organization) Bangalore in the fields of Embedded Systems, Digital Signal Processing, Digital communication systems and Microcontrollers during the period July 2001 to November-2006.

Worked with different clients:

• Netscout Systems, Tektronix Communications, Barclays Bank, U.T.C (United Technologies Corporation), Lufkin Automation and Qualitrol Corporation.

Co-Curricular Profile:
• Received patent for Secure computing device and method
• Received the TEAM ACHEIVMENT AWARD-2004 from Astronautical Society of India for the contributions made to RTDAP Subsystem of Doppler Weather Radar as a part of ISRO Programmes from Sri G.Madhavan Nair (Ex-ISRO Chairman).
• Proficient in CMMI VER-1.2 (DEV + IPPD)
• Proven ability to quickly learn new technologies and apply them intelligently.
• Excellent communication skills, self-starter and adept to learning.

Skill Set
Programming Languages:
• C, C++, VC++
• Linux Network Programming with TCP/IP
• Python, Twisted programming
• Assembly Language
• Lua
• CGI Programming in C
• Shell Scripting
• VHDL
Embedded Domain:
• BootLoader(UBoot), RedBoot (Board Bring Up Activities)
• Device Drivers (Kernel Programming), Linux-2.6.27
• Montavista RTOS (Real time Linux -2.6.18)
• VxWorks, Andriod
• QNX
• RT Linux
• GNU Tools (GCC, GDB), Valgrind
• BDI 300
• Apache Web server
Software Development Tools:
• Eclipse IDE
• Visual Studio - VC++
• Microchip's MPLAB
• MATLAB & SIMULINK for DSP
• WindRiver Tornado
• DevRocket (Montavista Distribution)
• QT
Microprocessors & Microcontrollers:
• BroadCom-56850/56860
• i.MX27L- ARM9 Processor, AT91SAM9G20, MPC8248, MPC8272
• Free Scale's MC9S08AC128, Atmega64
• PIC Micro Controllers - 16X,18X & dsPIC Series
• ATMEL 8031 & 8051
Communication Protocols:
• Google Protocol Buffers API's
• HTTP, TFTP, NTP, FTP, DHCP

• Telnet, PPPD over Modem, TCP/UDP,
• PPPD over Serial, Modbus over TCP/IP
• SPI, I2C, UART
Electronic Design Tools:
• Xilinx ISE, ModelSim
• Orcad
Configuration Tools:
• Git, Perforce , VSS & SVN
Others:
• Efficient in MS Office 2007
• Windows XP/2000/NT/9X
• Fedora Core, Knoppix & Ubuntu
• WireShark
Area of Interest: Real time data acquisition and processing, embedded processing, Embedded Networking, Digital signal processing, Microcontrollers & Microprocessors

ABSTRACT OF PROJECTS
Current Project:
Tools: C++, Linux, Python,

Programmer Analyst

Hallmark Global Technologies INC - May 2012 to February 2014

Received patent for Secure computing device and method

Responsible for:
• Remote software upgrade process (U.S.patent pending) will allow the device to check for any software updates and upgrade itself automatically to the latest software. It also provides the flexibility for the user to either upgrade the device or skip the upgrade altogether.
• Composite USB Mass storage and HID Driver is a Linux kernel device driver to mount the USB device as a mass storage as well as the HID device. The HID channel is used to communicate between the Linux and Windows applications.
• In addition to the above, also developed the user space linux inter process communication applications using socket programming.

Project #6: Restricted Access Control System
Tools: Embedded C, Linux, Socket programming, Lua, Google Protocol Buffers APIs, QT

Software Consultant

UTC Fire & Security, Boca Raton - September 2009 to April 2012

Parent Company: L&T
The project is related to access control system used by organizations big and small which enables an authority to control access to areas and resources in a given physical facility or computer-based information system. The device consists of card readers to extract data, an IO board which acquires the badge data and sends to the Main Panel for taking the appropriate actions based on the credentials. This also supports the configurable users (max up to 500K users), No. of Doors and No. of Authorities at system level (with per user allowing maximum up to 128). It also supports the various card formats like weigand (26/36 Bits), magstripe. AntiPass Back detection, arming the system, remote configuration are some of the key features. As a part of remote configuring the system, Google Protocol buffer APIs mechanism is incorporated as the communication media between the Main panel and the third party software's.

Project #5: Board Support Package-BSP for i.MX27L- ARM9 Processor
Tools: Embedded C, Linux

Project Leader

Lufkin Automation - June 2008 to September 2009

Duration: 15 Months
Team Size: 8
Client: Lufkin Automation, USA

project leader

Parent Company - June 2008 to August 2009

responsible for the design, development & testing of BSP for i.MX27L processor with a team of 8 people. The project aims porting the Boot Loader (U-Boot-v2-rc8) and the kernel (Linux-26.27) for the Processor Model: Free Scale iMX27L (for the Processor family-ARM9). Along with board bring up activities; the following device drives are developed.

- Ethernet
- SD Card
- I2C bus interface
- 5-UART's with RS-232 & RS-485
- LCD & Keypad Interface

Project #4: Fault Recording System - FRS
Tools: Embedded C, Linux. CGI's, Shell scripting, Eclipse IDE, Socket programming,
Apache web server, Wire Shark

Programmer Analyst

Parent Company - December 2006 to May 2008

L&T
FRS is a fault recording, synchronized phasor, fault location, power quality assessment and sequence of event monitoring device with remote terminal capability communicating with complementary integrated master station oriented towards the power system distribution market. It consists of Mother board with DSP, FPGA & POWER PC for handling all the functionalities of FRS. DSP &FPGA will be used for data capturing and sending the data to the CPU. The CPU functionality includes the data capture & recording from DSP & FPGA, storage & retrieval on request from the Master station or 3rd party devices.CPU is responsible for maintaining the user configuration & running the FRS with that configuration. In addition to record maintenance CPU is also responsible for Non-volatile memory management, event logging, accepting the triggers from remote entities (including cross triggers from other FRS units), auto-communication & MMI functionalities of FRS.

Project #3: Digital Receiver for Polarimetric Doppler Weather Radar Mark-II
Tools: Embedded C, VxWorks

Sr.Software Engineer (Design and Development)

IMD, Dept. of Science & Technology - December 2004 to November 2006

Role: Sr.Software Engineer (Design and Development)
Duration: 2- Years
Team Size: 18
Client: M/S India Meteorological Department-IMD, Dept. of Science & Technology-DST
Period: December -2004 to November-2006

Parent Company: Indian Space Research Company
As a Project Leader initiated design and development of (i.e., modern digital hardware and associated software, involving fast sampling rates needed for Radar signal processing) Digital Receiver as an up gradation for the existing RTDAP of DWR Mark-I with the latest technology. This system is designed and being developed by ISRAD in view of Polarimetric application. It uses the Real time VxWorks Operating system for Multi Tasking with Power PC as the Core Hardware. It also uses the Xilinx FPGA for Digital Down Converter (DDC) for converting the 30MHz IF to Base band.

Project #2: Real Time Data Acquisition and Processing (RTDAP) of DWR (Doppler
Weather Radar)
Tools: C, VC++ and MATLAB 7.0

Design, Developing and Coding

IMD, Dept. of Science & Technology - December 2002 to November 2004

-DST
Period: December-2002 to November-2004
Other Information: Astronautical Society of India has awarded TEAM ACHEIVMENT AWARD-2004 for the contributions made specially to the RTDAP Subsystem
Parent Company: Indian Space Research Company
ISRO RADAR DEVELOPMEMT UNIT-ISRAD was responsible for the design, development and realization of state-of-art S-Band Doppler Weather Radar for use by India Meteorological Department for their Cyclone Detection Radar-CDR System. DWR characterizes severe weather events like cyclones, thunder storms and rainfall estimation. This Radar is installed presently at Space-Port SDSC-SHAR, Sriharikota and IMD is operating this radar round the clock.
As a project Leader, played a key role in designing and developing the Real Time Data Acquisition and Processing (RTDAP) subsystem of DWR. This project is developed using PCI based TMS320C44 DSP Board. The Base band data is digitized and transferred to PC through PCI bus interface. The Data acquired in real time will be processed for estimating the Base Products like Reflectivity, Velocity and spectrum width of the Hydrometers. These Base products will be used mainly for nowcasting and forecasting of Weather.

Project #1: Monitoring and controlling unit of Transmitter-MCT
Tools: MPLAB-C, Assembly language, Orcad

Designing, Developing and Coding

Bangalore, Karnataka - July 2001 to November 2002

Duration: 18 Months
Team Size: 8
Client: M/S Bharat Electronics-BEL, Bangalore
Period: July-2001 to November-2002
Parent Company: Indian Space Research Company
MCT Unit is mainly for monitoring the various status and Interlock parameters of the transmitter and controlling them accordingly in real time. This unit is designed with dsPIC30F6014 Microcontroller with additional Hardware for interfacing with various status and Interlock parameters. The system has the capability of processing 144-Digital I/O Lines, 16-Analog Input lines and 32 Command Lines. Acquisition and processing of the data is done for every 1 milli second. The Board is designed with TCP/IP, RS-232 and RS-485/422 interfaces for communication with the PC. The acquired data can be logged in the PC for troubleshooting and also for the off-line analysis. This unit has the unique capability of monitoring and controlling the Transmitter remotely. Software is developed in C using MPLAB tool as front end. MCT is designed in a generic way, so that the Unit can be interfaced to any subsystem in the radar for monitoring and controlling.

EDUCATION

B.Tech in Electronics and Communication Engineering
Nagarjuna University