

Contact

Bothell WA
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Top Skills

Device Drivers
Linux
Agile Methodologies

Certifications

Learning S.O.L.I.D. Programming Principles
Networking Foundations: Network Media (LANs)
Learning Redis
Apache Kafka Essential Training: Getting Started
Learning Kubernetes

Prasad Roy Raju

Automation Engineer
United States

Summary

Skilled **Embedded** Engineer with a history of designing and developing effective **embedded** software.

Maintains a clear understanding of the working of **embedded** software Product Development and Services industries.

Good domain knowledge of Automation, DevOps, IoT Solutions, and **Embedded** & Mobility solutions.

Good programming knowledge of C, C++, Python, and Shell scripts.

Good working experience on Build systems Yacto, Build-root, and TimeSys good

Good protocol knowledge of I2C, SPI, PCI, **USB**, TCP/IP, Modbus, and BACnet.

Good Experience in post-silicon validation of silicon devices.

Good debugging experience in **embedded** systems using logical analyzer and oscilloscope.

Good experience with Wireless technology, Routers, Wireless extenders & Wireless standards.

Good experience in working with TCPIP, UDP, IPv4, IPv6 addressing, Ethernet, DHCP, and DNS.

Expert in system-level software (Drivers, **RTOS**, Test application).

Hands-on experience in creating CI/CD pipelines in Harness.io

Working experience in Jira, Git, GitLab, Kubernetes, Docker, and Package Manager Helm.

Good experience in automation framework development using Robot Framework.

Experience

Charter Communications

Automation Engineer

July 2021 - Present (1 year 4 months)

Greenwood Village, Colorado, United States

Develop, and maintain automated test cases in Robot framework for automated testing of advanced router firmware across several models of wireless routers.

Writing framework for advanced test scenarios of router firmware using Python.

Develop an automation script to verify the default wireless Network property.

Develop an automation script to Verify the port forwarding feature of the router.

Develop automation script to verify the Advanced Security IP Reputation Threat Generation.

Develop automation script to verify the Advanced Security Secure Browsing (Phishing) Threat Generation

Provide network support services for devices such as hubs, bridges, routers, and other hardware.

Microsoft

System Integration Engineer

January 2021 - June 2021 (6 months)

Bothell, Washington, United States

Automate test suite using Robot test framework for validating end-to-end communication of REST APIS for Edge adapter for vendor data ingestion modules.

Integration of vendor edge components to Azure IOT Edge platform.

Proposed technical feasibility solutions for new system designs and suggested options for performance improvement of technical components.

Develop an adaption layer between various vendor modules.

Containerization of vendor modules to deploy at Azure edge.

Deployed hyper-converged infrastructure with Windows Admin Center on SE350 Edge Server.

Lutron Electronics

Embedded System Engineer

September 2018 - December 2020 (2 years 4 months)

Coopersburg, Pennsylvania, United States

Build automation of platform manager unit test using python for a development build.

Automate nightly builds of IoT Hub firmware and lighting applications using python.

Automated production builds of IoT Hub firmware and lighting applications using python.

Platform software development and integration for IoT smart lighting control system.

Involved in CVE Vulnerability analysis of open-source packages used in customer IoT platform software.

Enhancement of customer support file creation scripts.

Bug fixing and enhancement of offline firmware upgrade software.

Develop python TCP socket server layer for end-of-life application for customer platform IOT HUB.

Platform software integration and development for customer wireless processor hubs.

Develop new product testing scripts for IoT hub peripherals.

Involved in the validation of secure elements on the customer platform.

Adopted object-oriented development methodologies such as polymorphism and inheritance.

Collaborated with software, firmware, and hardware engineers to develop complete **embedded** solutions.

Crown Equipment Corporation

Embedded System Engineer

May 2016 - September 2018 (2 years 5 months)

New Bremen, Ohio, United States

Platform software development for lift truck display unit system.

Manufacturing functional test framework development for IMM and RIM modules using python and shell script.

IMM video decoder and external camera driver feature enhancement.

Radio interface module board support package porting to 4.1 Linux kernel.

Nand flash driver integration with IMM module BSP.

Greenhill's TLS stack integration with the IMM module.

FCC compliance testing software development for TI radios.

Develop test software for continuous Tx/Rx testing of TI WLAN chip.

Develop test software for the Bluetooth Qualification process.

Collaborated with software, firmware, and hardware engineers to develop complete **embedded** solutions.

Developed software within the Linux Kernel space.

L&T Technology Services Limited

Program Manager

October 2015 - April 2016 (7 months)

Bengaluru, Karnataka, India

Build solutions and POCs based on customer and project needs.

Lead windows 10 UMDF barcode scanner driver development project.
Lead the Cassette printer driver development support for the medical industry.
Contribute to practice growth initiatives Interviews, training, mentoring, operational activities, etc.
Developed project plans and managed project scope using methodologies to guide projects from conceptualization to implementation and maintenance.
Provide support to various proposal-making for practice growth.
Interacted with customers and clients to identify business needs and requirements.

Cyient

Senior technical lead

July 2012 - September 2015 (3 years 3 months)

Bengaluru, Karnataka, India

Setting up teams, providing technical guidance, setting up goals and objectives, etc.
Contributed to the organization-wide process improvement.
Collaborated with the sales team for proposals and converted them into business.
Development of android-based Remote touchpad driver (both gesture and navigation) for MINIX OTT Box.
Development of HID Client driver to handle the TI **USB** vendor-specific data.
Development of an input driver for sending the vendor data to the input subsystem.
Development of compiler front-end validation tool for Reflection interface compiler
Customize and Integrate the Gtest framework into the RIC reference library.
Develop test cases for RIC Compiler
Develop and Integrate the reference lex and yacc with the test framework.
Development of desktop-based MODBUS ASCII Master Application to interface with Smart Factory application board and developed the auto addressing and firmware upgrade feature.
Post silicon validation of CC3101R Simple Link Wi-Fi Network device mainly used for IoT applications.
Validation of TI IP modules, GPIO, UART, SPI, and I2C
Developments of Multi-touch solutions to AM335x Starter Kit.
Responsible for Android Jellybean bring-up on TI Panda Board.
Visited customer locations to evaluate requirements, demonstrate offerings, and propose strategic solutions for diverse needs.

L&T Infotech

Project Lead

January 2008 - July 2012 (4 years 7 months)

Bengaluru, Karnataka, India

Providing support to the Android Cisco Cius enterprise mobility platform device sustenance activities and involve in platform enhancement activities.

Involved in additional feature development like WIFI Russian regulatory, implementation, kernel logging, etc.

Board bring-up and peripheral driver porting on android Gingerbread to different CDMA-based Samsung Galaxy S2 mobile pre-release models.

Involved in porting LCD, touch, FSA peripheral drivers, and fixing QA defects.

Provide technical support on TI Battery Management System Software and was involved in the development of a new Test Tool and validation framework for the customer-developed new firmware.

Development of post-silicon validation software on **USB** 3.0 Host controller.

Porting of Windows Mobile 6.5 OS on OMAP3530 ACME Platform.

Porting of Windows CE 6.0 OS on OMAP3-based Portable media player.

Porting of Windows CE 6.0 OS on IMX31-based Custom platform board that includes porting of peripheral device drivers like display, Touch Screen, Keypad, etc.

Firmware testing of General Dynamics Itronix Tadpole Ultra-Thin Client Notebook.

Drove team's execution of quality management throughout the division, improving process effectiveness, cost-effectiveness, resource, and process efficiency.

Global Edge Software

Technical Lead

February 2006 - December 2007 (1 year 11 months)

Bengaluru, Karnataka, India

Porting 802.11 N wireless LAN adapter PC-based Diagnostic software on windows CE 6.0.

Porting diagnostic application/wireless protocol driver/Wireless Mini-port driver.

Development of wireless Network Bridge Protocol Driver for Marvell 8338 Wi-Fi Dongle and developed the network bridge protocol driver using WDM.

Development of **USB** Device Firmware Upgrade(DFU) Windows Class Driver for a **USB** camera device and validation application.

Conducted on-site product demonstrations to highlight features, answer customer questions, and redirect concerns toward positive aspects.

purple vision technologies

Team lead

May 2005 - February 2006 (10 months)

Bengaluru, Karnataka, India

Development of post-silicon validation software of **USB** 2.0 Host controller that include the development of function driver (WDM) and validation application.

Development of validation driver for Still Image compression PCI card.

Board brings up TI OMAP5912 ARM EVM BOARD on windows CE 6.0.

Development of validation software for **USB Audio** playback devices.

Provided technical guidance, peer review, and mentorship to junior engineers engaged in building system designs.

IBM Global Services

Senior Software Engineer

November 2004 - April 2005 (6 months)

Bengaluru, Karnataka, India

Responsible for new service additions to ZNP Application for NIDA services.

Develop new jobs for supporting new functions of the ZNP application.

Fixing customer-related bugs, bench testing, and unit test development.

Collaborated with cross-functional development team members to analyze potential system solutions based on evolving client requirements.

HCL Technologies

Software Engineer

October 2003 - October 2004 (1 year 1 month)

Haryana, India

Maintenance and bug fixing of System Network Architecture-based External Host Interface POD application service of the NCR Image Mark Transaction Manager.

Enhancement and bug fixing of High-Speed Capture for Image Mark POD application service (EPA).

Worked with software development and testing team members to design and develop robust solutions to meet client requirements for functionality, scalability, and performance

Education

University of Calicut

Bachelor's Degree, Electronics & Communication

Prasad Raju

- Greenwood Village, CO, US

Contact Information

- 65n-6uv-zos@mail.dice.com
- 5673601088

Summary

As an accomplished **Embedded** Engineer, I have a solid track record in designing and developing robust **embedded** software solutions. I possess a comprehensive understanding of the intricacies involved in product development and service delivery within the **embedded** software industry. I am adept in various domains such as Automation, DevOps, IoT Solutions, and **Embedded** & Mobility solutions. I am proficient in programming with languages such as C, C++, Python, and Shell scripts, allowing me to handle a broad spectrum of software development tasks effectively. My hands-on experience with build systems, including Yacto, Build-root, and TimeSys, allows me to manage and streamline software builds efficiently. Having worked extensively with protocols such as I2C, SPI, PCI, **USB**, TCP/IP, Modbus, and BACnet, I am capable of developing, debugging, and managing a variety of communication interfaces. My experience extends to post-silicon validation of silicon devices, where I have been involved in ensuring the functionality and reliability of hardware components post-fabrication. As part of my debugging toolkit, I am skilled at using logic analyzers and oscilloscopes to investigate and resolve issues in **embedded** systems. My expertise also encompasses working with wireless technologies, routers, wireless extenders, and various wireless standards. I am proficient in handling network protocols and technologies, including TCP/IP, UDP, IPv4, IPv6 addressing, Ethernet, DHCP, and DNS. My technical skill set also includes developing system-level software such as device drivers, real-time operating systems (**RTOS**), and test applications. I have hands-on experience in setting up continuous integration and continuous deployment (CI/CD) pipelines using Harness.io, which has been instrumental in ensuring the quick and reliable delivery of software products. I am familiar with a range of development tools and platforms such as Jira, Git, GitLab, Kubernetes, Docker, and the package manager, Helm, which I have used extensively for project management and streamlined software development. My experience also includes developing automation frameworks using the Robot Framework, allowing for more efficient testing and validation processes."

Work History

Total Work Experience: 20 years

- **Embedded** System Engineer Lutron Electronics (L&T Technology Contactor) USA
Sep 01, 2018
- **Crown Equipment Corporation L&T Technology Contactor**
May 01, 2016
- **Embedded** System Engineer L&T Technology Service Ltd
Oct 01, 2015
- **Senior Project Manager CYIENT Ltd**
Jul 01, 2012
- **Project Lead L&T Infotech Ltd**
Jan 01, 2008
- **Technical Lead Global Edge Software (P) Ltd**
Feb 01, 2006
- **Senior Staff Engineer Purple Vision Technologies (P) Ltd**
May 01, 2005
- **Senior Software Engineer IBM Global Service Ltd**
Nov 01, 2004
- **Software Engineer HCL Technologies Ltd**
Nov 01, 2003
- **Senior Technical Lead Embedded** Software & Electronics

Education

- **Bachelors** | university of Calicut

Skills

- agile methodologies
- arm
- arm cortex m3
- arm cortex-m3
- artificial intelligence
- assembly
- bsp
- c
- c#
- c++
- can bus
- clearcase
- cmake
- debugging
- distributed systems
- **embedded** software
- **embedded** software programming
- **embedded** systems
- git
- i2c
- internet of things
- keras
- kernel drivers
- kernel programming
- linux kernel
- manufacturing
- matplotlib
- microcontrollers
- numpy
- omap
- operating systems
- pcie
- post silicon validation for ti
- programming
- **rtos**
- samsung s5pc110
- shell scripting
- tensorflow

- **testing**
- **universal asynchronous receivertransmitter**
- **visual studio**
- **wdk**
- **windows ce**
- **windows mobile**
- **engineering** - 5 years
- **integration** - 7 years
- **software** - 14 years
- **firmware** - 13 years
- **framework** - 12 years
- **qa** - 12 years
- **verification and validation** - 11 years
- **wireless** - 11 years
- **upgrades** - 5 years
- **iot** - 4 years
- **python** - 4 years
- **wlan** - 4 years
- **business requirements** - 5 years
- **implementation** - 5 years
- **usb** - 10 years
- **android** - 8 years
- **microsoft windows** - 8 years
- **it management** - 5 years
- **network** - 5 years
- **linux** - 8 years
- **microsoft windows ce** - 7 years
- **technical support** - 5 years
- **cdma** - 4 years
- **device drivers** - 4 years
- **microsoft windows mobile** - 4 years

Work Preferences

- Likely to Switch: False
- Willing to Relocate: True
- Travel Preference: 0%
- Preferred Location:
 - Colorado Springs, CO, US
 - Texas City, TX, US
 - Taos, NM, US
- Work Authorization:
 - US

- Work Documents:
 - Have H1 Visa
- Desired Hourly Rate: 72+ (USD)
- Desired Salary: 120,000+ (USD)
- Security Clearance: False
- Third Party: False
- Employment Type:
 - Full-time

Profile Sources

- linkedin: <https://www.linkedin.com/in/prasadroy>
- twitter: <https://twitter.com/rprasad11>
- linkedin: <https://linkedin.com/in/prasad-roy-raju-8ba7365>
- Dice:
<https://www.dice.com/employer/talent/profile/73a7fc7d4be15dc03907731dfd2dc066>