

PREM SINGH

Embedded Lead Engineer



Contact

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Personal Details

Date of Birth : 18-11-1989

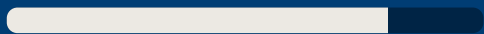
Marital Status : Single

Nationality : INDIAN

Gender : Male

Skills

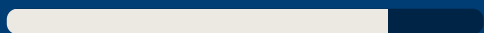
C 80%



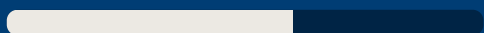
FreeRTOS 80%



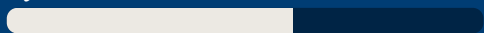
CMSIS RTOS 80%



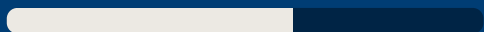
C++ 60%



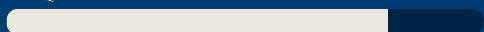
Python 60%



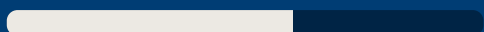
Linux 60%



MQTT 80%



VHDL 60%



OBJECTIVE

To prove myself dedicated, innovative, worth and energetic embedded lead engineer in a progressive organisation where my skills can be effectively utilised and which offers excellent opportunities to progress and be a member of a team that dynamically works towards success and growth

KNOWLEDGE HIGHLIGHTS

Hands on experience and high skills in C programming in BareMetal and RTOS platform.

Strong knowledge of microcontroller fundamentals and experience with developing multithreaded and multi process applications

Working knowledge in using communication interfaces UART, SPI, I2C, USB, ethernet, MQTT etc

Ability to handle a variety of tasks, effectively solve problems with numerous and complex variables and be able to shift priorities flexibly

Good knowledge in software architecture, multi threading, inter process communication, socket programming etc

Quick in grasping knowledge in any technology and implementing same in very limited time constraints

Hands on working experience in VHDL programming and deploying FPGAs using versatile Xilinx tools

Working experience in FPGA based embedded processors such as pico blaze, micro blaze and powerPC

Good knowledge in Linux, device drivers, RTOS, Python, C++ and visual studio programming

Good knowledge of LinuxOS, command line interface, shell scripting, system programming, kernel programming, device drivers, RT Linux and application programming

Good knowledge in linux device drivers like character type and block type like USB

Hands on experience in programming and developing systems using stm32, ARM(7, 9, 11), cortex M, AVR, 8051, arduino, Raspberry Pi, beaglebone and many others

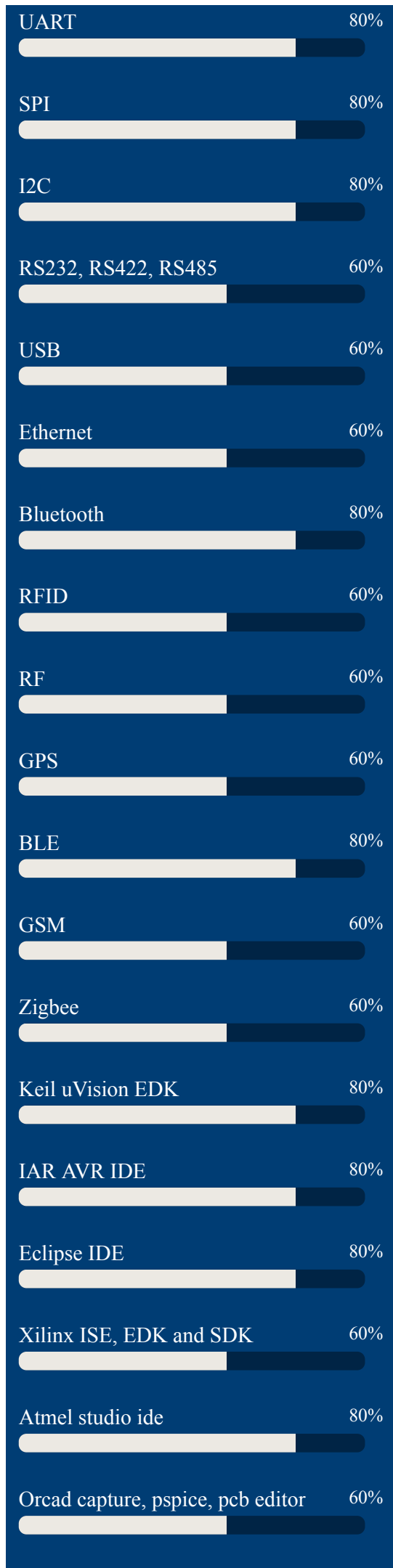
Hands on experience in APIs, AWS, mosquitto, node-red, Azure, Apache and MySQL.

Good knowledge in wireless technologies like GPS, GSM, Wi-Fi and Bluetooth

Working knowledge in cloud computing and internet of things (IOT) in various models like IAaaS, PaaS and AaaS

Hands on experience with embedded test equipment such as oscilloscope, spectrum analyser, signal generator, bus analyser, in circuit emulator, logic analysers etc

Capable of switching focus in various situations and apply them to quickly learn new tech technologies and absorb new methodologies



EXPERIENCE

Kidde Global Solutions(formerly Carrier Technologies)

30-06-2023 - Till date

Lead Engineer

Coding efficient solutions in embedded C in RTOS platform for two different fire safety projects

Collaborate with cross functional teams for seamless project execution

Participate in code reviews, ensure code quality and follow established coding standards

Providing expert advice in some or all aspects of the programming methods, tools, and standards used in the application delivery organisation

Excellent analytical skills for troubleshooting and issue resolution. Possess high capability in driving issues to closure.

Experienced person with solutions to system problems either troubleshooting the problems or guiding others on how to solve the problems

Assisting with software integration and ensuring software features/defects are delivered with correct software/versions

L&T Technology Services

25-10-2021 - 27-06-2023

Tech Lead

Developing and maintaining firmware for microcontrollers

Application level programming and implementation of wrapper functions for middle ware layer

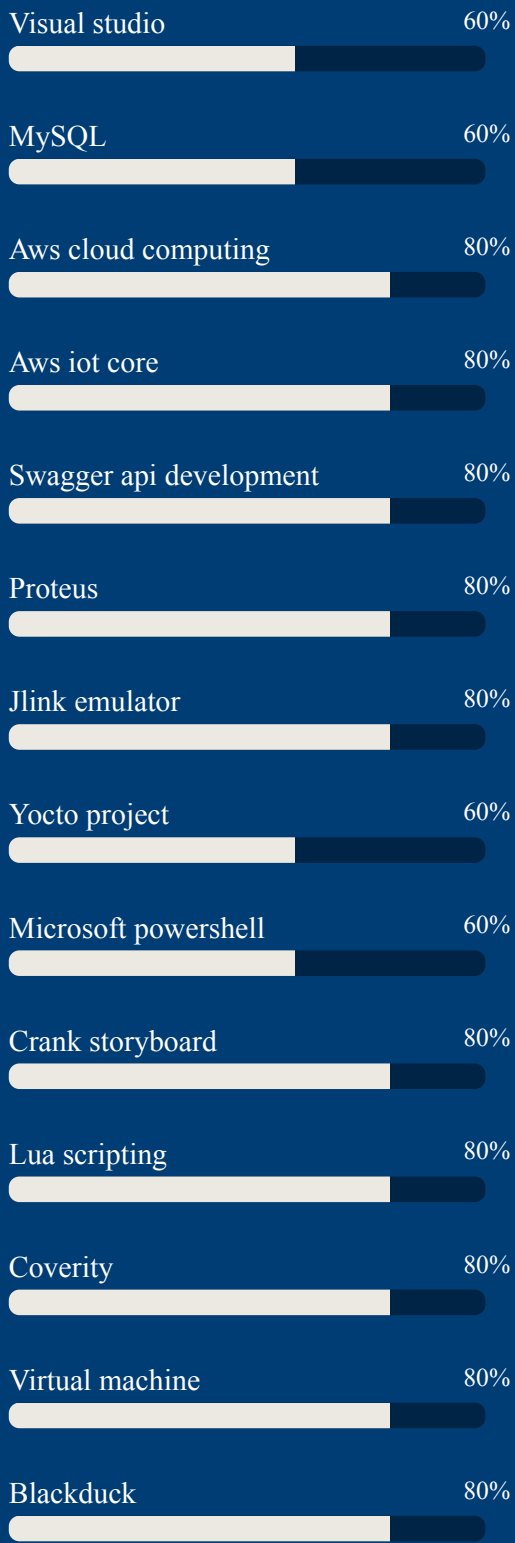
Developed code to communicate through peripherals such as UART, I2C and SPI

Management of technical team with responsibilities that include project planning, system architecture, design requirements, definition and software development

Planning, designing and conducting test of programs, correcting errors and retesting to deliver an error free product.

Excellent track record of successfully managing projects from conception to completion with strong leadership, managerial, analytical and technical skills

Converted the product vision into user stories, the product backlog based on the corporate strategy and work with the scrum teams to convert the stories into product features



Languages

English
Hindi
Telugu

Major Experienced Projects

YODA
Mercury
Tesla

SA Tech Software India Pvt Ltd (client ABB Ability Innovations)

22-06-2020 - 18-10-2021

Senior software engineer

Addition of new features to the application throws a python application layer, wrappers

Hands on experience in developing low level software for microcontroller-based environments.

Individual development of swagger APIs and its backend logic

Developing Linux scripts for the application and adding different features in Linux environment like backend services, Crown jobs etc.

Implementing common algorithm into the project to calculate different KPIs and analyse the collected data

Independently added new software machine objects like gearbox pump and fan to the project and developing software support for them.

Reacting quickly and as necessary to live software errors and service problems to limit downtime and resolve the problems during project handover.

Triaguna Solutions Pvt Ltd

27-08-2019 - 10-06-2020

Senior IOT developer

Worked on C, python and linux for different projects in the company

Worked on all fields like inventing, designing, programming, implementation, testing and maintenance on both hardware and software platforms.

Message queuing telemetry transport (MQTT) programming primarily using paho MQTT client programming libraries, example C, C++, Python, etc

Responsible to keep up with IOT technology trends and be able to relate those trends with our company IOT solutions.

Researching new technologies to optimise the current IOT solutions and to make themselves sustainable for the future applying in House standards and make market best practices

Research and evaluate alternative solution solutions and recommends the most efficient and cost-effective application programming solutions

Understanding the client's business use cases and technical requirements and be able to convert them into technical design which elegantly meets the requirements.

Voyager

Digital Servo Controller Unit

MachSenseR Data Acquisition Unit

Three Axes Servo Controller

Part Harvesting using AWS IOT

Blanco project

Automatic asset details triggering

VISA Holding

US B1/B2

Pragathi Micro Instruments Pvt Ltd

02-09-2014 - 23-08-2019

Embedded Developer

Experienced all stages such as research, design, develop, debug, optimise and test embedded hardware and software

Embed software in xilinx FPGAs and micro controller and perform unit integration and Testing.

Hands on experience in FPGA and bare metal programming for different microcontrollers.

Worked on high speed communication protocols through ethernet and usb.

Coordinate firmware test/verification and debug, support system, integration and validation

Generate and Drive continuous improvement initiatives aimed at increasing business performance

Proactively leading team members to enhance the system performance and capacity

Analyse and enhance efficiency, stability and scalability of system resources

EDUCATION

Malla Reddy Institute of Science and Technology (MRITS)

Master of Embedded Systems and VLSI Design

JB Institute of Engineering and Technology (JBIET)

Bachelor of Electronics and Communication Engineering

Quli Qutub Shah Polytechnic College

Diploma in Electronics and Communication Engineering

New Paramount High School

SSC

PROFESSIONAL TRAINING COURSES

Advanced Embedded Systems certified training course with a real time projects from Sigma solutions Pvt Ltd, Hyderabad

Advanced Internet of Things certified training course with real time projects from Sigma solutions Pvt Ltd, Hyderabad

Orcad Capture, PSpice and Allegro PCB Editor certified training course from CENTER CAD Centre, Hyderabad

Real Time Embedded Project certified training course from Zonta Technologies, Hyderabad

Integrated Course in Communication English from Ramakrishna Mutt, Hyderabad

