INDERPREET SINGH

Embedded System Engineer & Integrator

LINKS

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CONTACT

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EDUCATION

Canadian Equivalency - Masters Degree

Pre-PhD Course, Guru Nanak Dev University, India(2015)

M.Tech. Electronic Systems, Guru Nanak Dev University, India (2012)

B.Tech. Electronics & Communications, Punjab Technical University, India (2006)

LANGUAGES

- English **IELTS** (8.5/8.5/7.5/8.5)
- Hindi, Punjabi

PUBLICATIONS

- Contributor to Creative Projects with Raspberry Pi(419725009)

PROFESSIONAL STATEMENT

Electronics Systems Engineer with over 8 years of experience in designing industrial automation and control products and hardware software integration. Creative thinker skilled in managing technical requirements and well versed in rapid product design from problem to production. Skilled at creating and mentoring teams and has excellent written and verbal communication skills with experience with Agile methodologies. Contributing writer for hackaday.com.

EXPERIENCE

Rajdeep Info Techno Pvt. Ltd, India

Chief Design Engineer — 2012-2014 & 2015-2018

- Agile Development: Wrote the manual for Scrum and ISO workflows customised to hardware product design and internal process guidelines.
- Embedded Systems Architect: Responsible for over a dozen integration products used in Toll Automation Systems, sold as commercial solutions.
- Design Optimisation: Reduced production costs for existing products by up to 80% by redesigning hardware for efficient production and site performance.
- Project Management & Execution: Responsible for converting problem statements into cost effective solution and Project Planning and execution from requirement to maintenance while adhering to time and cost budgets.
- Communication: Responsible for collaborating with multiple stakeholders such as upper Upper Management for Budgeting as well as Software Teams for Integration. Also responsible for transitioning product from prototype to production
- Technical Representation: Lead client interactions to interpret system requirements for new products and present/defend existing solutions.

Team Lead - Electronics — 2009-2010

- Technical Lead: Responsible for Team co-ordination for Embedded Development Group
- Product realisation from Design document: Execute projects within scope, schedule and budget constraints.
- Board Bringup: Lead Printed Circuit Board design, assembly, testing, validation for Component Selection and Layout for 2 and 4 layer boards.
- Design Reviews & Documentation: Record Test and Validation results and conduct a formal review of all tasks on a regular basis.
- Firmware Development: Write and oversee the testing & validation of Firmware for mission critical control systems.

- Contributor-at-large to HackaDay.com

CERTIFICATIONS

- Introducing Spring Boot - Udemy(2018)

- Product Support: Responsible for providing site assistance and improvement in existing solutions and quality assurance.

Development Engineer - Electronics 2008 - 2009

- SOC Design: Designed SOC systems in VerilogHDL and C++ using Altera Quartus II and NIOS II Softcore Processor
- Board Bringup: Designed and Tested 2 and 4 layer PCBs for control and automation products
- Product documentation for relevant projects

International Institute Of Information Technology

Research Associate - VLSI 2006-2008

- Cadence RTL Compiler and Encounter Lab preparation and delivery
- Course Material audits

SKILLS

Programming Languages

Embedded C/C++ , Python, MATLAB, JAVA, NodeJS, HTML/CSS/JS, VerilogHDL, BASH Scripting

Board Bring up/Prototyping/3D Printing

Autodesk Eagle, KiCAD, Cadence OrCAD, LT Spice, Autodesk Fusion 360, Adobe Photoshop.

Hardware

ARM Cortex M, AVR, MSP430, Intel x86 - IoT 2020, SiLabs 8051, TI CC3200, ESP8266, Raspberry Pi

Protocols

I2C, SPI, UART, TCP/IP, MQTT, Bluetooth, RF Communication, Custom Protocol Stacks for POSIX and Embedded Systems

Software Tools and OS

Spring Boot, Git(and Gitlab), Eclipse, IntelliJ, Visual Studio Code, Microsoft Office, Android Studio, NodeRed, LabView, Linux(Kernel Modules and drivers)

REFERENCES

- Yogesh Dhongade, Director, Rajdeep Info Techo Pvt Ltd. Pune (yogeshd@rajdeepgroup.com)
- Doug Wong, Director of Electronics Systems Engineering, Med-End, Ottawa, Canada, (jdewong@bell.net)
- Dr. Maninder Lal Singh, Deptt. Of Electronics Engineering, Guru Nanak Dev University, Amritsar (mlsingh7@gmail.com)
- Prof. Subrata Ghoshal, Professor, ISquareIT, Pune (subrataghoshal@gmail.com)
- Mike Szczys, Editor-In-Chief, Hackaday.com, (mike@hackaday.com)