**INDERPREET SINGH**

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**Profile**

Skilled Engineering Professional with over 8 years of experience in architecture, designing, analyzing and deploying of Embedded Firmware and Hardware. Expertise in rapid prototyping with 8-bit and 32-bit microcontrollers and a proven track record of success. Strong technical and methodological aptitude and background in hardware bring-up and integration. Team player with excellent written and verbal communication skills with the ability to reduce development costs and within scheduled timelines.

**Highlights**

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| * Embedded Firmware & Hardware * Project Management * Software Integration | * Agile/Scrum * Professional Writing * Internet Of Things |

**Skills**

**Programming Languages**

Embedded C/C++, C++11, Python, NodeJS, VerilogHDL, BASH Scripting, HTML/CSS/JS

**Board Bring-up and Simulation**

Autodesk Eagle, KiCAD, Cadence OrCAD, LT Spice, Autodesk Fusion 360(3D Modelling)

**Hardware**

ARM Cortex M0, M3, M4, 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, Eclipse, IntelliJ, Visual Studio Code, Microsoft Office, Android Studio, NodeRed, LabView, Linux(Kernel Modules and drivers, threads, Make), Git(Github and Gitlab), Jira Software, Asana, Trello, Slack, Google Suite, Adobe Photoshop

**Professional Experience**

**Hack-A-Day.com 2017 – Current**

*A Leading Online Technology Magazine*

**Contributor-At-Large**

* Content Writing: Writing Detailed Original Content such as tutorials as well as short articles.

**Rajdeep Info Techno Pvt. Ltd, India**

*One of the largest Tolling solutions and construction companies in India*

***Chief Design Engineer* July, *2012 to June, 2014 & July, 2015 to July, 2018***

* Embedded Systems Architect: Responsible for designing hardware and firmware including component selection for new products.
* Board Bring-up: Leading Printed Circuit Board design, assembly, testing, and validation for Components and Layouts for 2 and 4-layer boards.
* Firmware: Writing mission critical firmware and protocol stacks for microcontrollers and Linux.
* Software: Writing test scripts in Python for integrating hardware with computers and networks.
* Communication: Point of contact between multiple stakeholders including Upper Management and Software and Hardware Teams for developing solutions.
* Technical Representation: Leading client interactions to interpret system requirements for new products and presenting / defending existing solutions.
* Team and Project Management: Generating Cost and Time budget estimates.

***Team Lead - Electronics*** **April *2009 to June 2010***

* Technical Lead: Responsible for co-ordinating the Team for Embedded Development Group
* Product Realisation from Design: Executing projects within scope, scheduling and budgeting
* Board Bring-up: Designing and finalizing schematics as well as layouts for multi-layer boards. Design Reviews & Documentation: Recording Test and Validation results and conducting formal reviews of all tasks on a regular basis.
* Firmware Development: Writing and overseeing the testing & validation of Firmware for mission critical control systems.
* Product Support: Providing site assistance and improvement in existing solutions and quality assurance.

***Development Engineer – Electronics* January, *2008 to March 2009***

* System On Chip Design: Designing SOC systems in VerilogHDL and C++ using Altera Quartus II and NIOS II Softcore Processor
* Board Bring-up: Designing and Testing 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

**Education**

**Master of Technology –** Communication Systems ***2010-2012***

*Guru Nanak Dev University, India*

* *CPGA 8.4/10 (Equivalent to 74.3%)*
* *Credentials Assessed by World Education Services, Canada*

**Bachelor Of Technology** – Electronics and Communication Engineering***2002-2006***

*Punjab Technical University, India*

* *77.71% (Equivalent to 2.8 4.0GPA)*
* *Credentials Assessed by World Education Services, Canada*

**Certifications**

**IELTS – General May – 2017**

* Listening 8.5, Reading 8.5, Writing 7.5, Speaking 8.5