Sudhanshu **Gupta**

Senior SDE - III @ Amazon (L6)

C | C++ | Java | ARM Assembly | Python
BSP | RTOS | DS & Algo | Design Patterns | Android

CONTACT

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in sudhanshu-gupta-4844878

EDUCATION

M.S. [Softwares Systems]
BITS Pilani
2007 - 2009

B.Tech [Electronics & Telecom]
College Of Engineering Roorkee
2000 - 2004

INTERESTS

SYSTEM DEBUGGING
DRIVER DEVELOPMENT
ML & AI
RASPBERRY-PI & ARDUINO
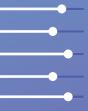IoT / CLOUD BASED PROJECTS
PROJECT MANAGEMENT

SKILLS

BSP
Device Drivers
Android
RTOS
OS Concepts
RTOS

WORK EXPERIENCE
20yrs exp (Oct 2004 till present)

Senior SDE - 3 — Nov '23 - Present
Amazon, Bangalore
Worked on Amazon's SMP Devices (Kara, Sheldon, Mantis, Karat, Gazelle) as part of BSP team, Bluetooth Remote Host side software, FireTv's Settings APK (Solutions Engineering) developer.

Senior Staff Engineer — Apr '20 - Sep '23
ChargePoint Technologies, Gurgaon
New Feature development (C / C++14) on EV Charging Stations (Linux App Developpment) under NPI framework and maintainence of legacy products. Managed a team of 3 engineers & liaise with cross functional teams for deliveries. Regular stat`us presentations to senior management.

Staff Engineer — Mar '17 - Mar '20
NXP Semiconductors, Noida

Board Bringups, Uboot, Linux, Debugging, Driver Development (Tbgen, Axiq, DCS, Clocking) on NXP SoCs.

Senior Android Developer — Sep '15 - Feb '17
OLX India Pvt. Ltd., Gurgaon

Feature development on OLX's C2C consumer segment based Android Application. Requirements understanding from Product owner and designing team.

Senior Software Engineer — Feb '11 - Sep '15
Intel Technologies, Bangalore & Noida

Board bringup & System Debugging for Intel's internal projects (Android based tablets) and at client location(s) Micromax (Gurugram) , Samsung (Noida)

Senior Software Engineer — Jun '06 - Jan '11
Infineon Technologies, Bangalore

System Debugging for Infineon based base-band SoCs at various client and internal project locations (Korea, China, Germany, Finland, Austria, Nigeria).

Software Engineer — Oct '04 - Apr '06
LG Soft India Pvt. Ltd.

PhoneBook App developer using LG's UI development framework - PDK.

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PROFILE
Board Bringup (Uboot & Linux) | System Debugging | Platform (Middleware)
Embedded Mobile Applications - RTOS | Drivers development
Android Application Development

PROJECTS UNDERTAKEN

Amazon Development Centre, Bangalore

SMP (Streaming Media Players)
• Production issues analysis related to System / BSP of Legacy SMP products across the world.
• Responsible for Code reviews for both vendor and in-house code.
• Preparation of Release software that goes into SMP products (Kara, Mantis, Sheldon, Sheldon Plus, Gazelle) across globe.
• End-to-End Vendor interaction for driving the open issues to conclusion.

Bluetooth Remote Host - SMP Devices
• Worked on on-boarding of new and existing 3P remotes on both SMP & FireTv based remotes on the Host side.
• Bug fixing of any BT remote related issues on host side.
• Travelled for an internal workshop (21 days) to Sunnyvale (USA), contributing my Remote Onboarding skillsets for an upcoming product.

FireTv Solutions Engineering Team - Amazon's TV
• Worked on Amazon's 3P FireTv OS based products (Televisions).
• Designed and owned features from scratch to deliverables. "Remote Keys Block" in Hotel mode feature being one of them.
• Contributed to numerous code reviews within team.
• Mentored junior team members with their technical queries.

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PROJECTS UNDERTAKEN

ChargePoint India Pvt. Ltd. Gurgaon

Macaw NPI (New Project Initiative)
• Board Bringup of EV Charger with NPI code base.
• Single Handedly worked on writing application level drivers (Linux User Space) to Start / Stop charging over SPI interface.
• Demo given to Senior VP, much appreciated.

Legacy Product (CPH / CT4K / CP4K / CPE250)
• Managed & Mentored a small team of 3 engineers.
• Responsible for resolving production issues on legacy EV stations.
• Hosted cross-functional weekly status meetings with upper management including VP-Product Team, VP-Cus- tomer Escalations.
• Participated in Design discussions and freezed low level architectural details for new feature developments for legacy products.

Panther NPI (CP6K)
• Developed few critical C++14 linux user space applications for ChargePoint's new age EV station - "Commissioner - running as a systemctl service" "DevicePair"
"Remote Logs Fetch" - scalable design (uses Polymorphism that accomodates fetching station logs over different communication protocols - supports https & ftps.
"Reset Factory Defaults" - feature implements linux (isolation) targets to reset stations back to factory state.
• Participated in Design discussions with US dev team and freezed low level details for new feature developments on legacy products.

Board Bringup (DCC board)
• A strategic PoC project to demonstrate India team's skill sets to upper management. Scope of this project was more of boot to prompt.

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P R O J E C T S   U N D E R T A K E N

NXP Semiconductors India Pvt Ltd, Noida

Geul&WDL–5GSoC
· Board Bringup and bug fixes.
· Conducted regular code-reviews for junior team members.
· Architected & Developed Drivers on FreeRTOS
· TTI (Tick Timer Interrupts) - User-Space Application, Library & Linux kernel driver development.
· TBGEN (Time Based Generator)
· DCS (Data Conversion System)
· AXIQ Loopback driver
· Test-Framework that enables various teams to test their code without recompilation of binary.

VNP – Vehicle Network Processor
· Board Bringup and bug fixes.
· SoC primarily focused at automotive industry.

LS1028 – ENETC & TSN
· Pre-Silicon and Post-Silicon Board bring up. activities. (Uboot boot loader & Linux).
· Preparation of Quality Docs for Releases.
· Scrum / Agile methodologies followed religiously.
· Debugging of code via in house debugger – NXP's CodeWarrior & CCS

OLX India Pvt Ltd., Gurgaon

Developed New Features (Sole Ownership)
· Complete Ownership of White Theme project.
· Zopim Chat (Customer care chat assistance).
· Content First feature development.
· Bug fixes.
· Implementation of Native Ads (DFP) on HomeScreen and Ad Details page.

Intel Mobile Communications, Noida/Bangalore

Android platform engineer
· Debugging of platform issues for Android based Micromax tablets on Intel Chipsets. Handling Linux kernel driver issues that occur on customer products.

Infineon Technologies, Bangalore / Onsite

· Phonebook expert for Infineon's Apoxi framework (C++).
· Glue layer development (TINA)
· System Debugging.
· Debugging System issues, (Lockups, Deadlocks, Crashes, Hardware issues).
· Power measurements, Performance / Latency measurements.
· Worked with major OEM(s) – LG (Korea), Samsung (Korea, Germany), Nokia (Finland), BenQ (China)

LG Soft India Pvt Ltd, Bangalore / Korea

· Application engineer (C++ based).
· MMS Stack developer
· PhoneBook expert

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TECHNICAL SKILLS

Operating System(s)

Linux, Windows, Mac

RTOS

Nucleus PLUS, ThreadX, FreeRTOS

Languages

C, C++, JAVA, ARM Assembly, Python, PHP

Data Structures & Algorithms

Stacks, Queues, Linked List, BST,
Dynamic Programming,
DNF - Deutch National Flag (2 / 3 - way partitioning),

Network Programming

TCP/IP,
IPC,
Multithreaded programming

IDEs

VS Code, Source Insight, Eclipse,
Android Studio (Google) , Visual Studio.NET,
KEIL uVision, Arduino IDE

Design Patterns

Creational : Singleton, Factory
Structural : Facade, Adaptor
Behavioral : Chain Of Responsibility, Command, Iterator,
Mediator, Observer

Android App Development (JAVA)

Threads, ListArray, Custom List Adapters, Telephony Manager, SMS Manager, Grids, Tab Layout, Sliding Navigation Bar, Action Bar, Cursors, SQLite, Exception handling, UI Designing, Design Patterns (OO based)