

ANURAG KANSAL

307 Goldenrain Ave, Fremont, CA 94539

PROFESSIONAL SUMMARY

Highly skilled **embedded** software development professional bringing expertise in software design, development and integration, management. Advanced knowledge of C programming language and data structures for consumer microelectronics (Set Top Box / Smartphone/ASR/Computer Vision / AR/VR...) with Strong development, debugging, self-motivated and leadership skills coupled with demonstrated ability to deliver product in the market.

Extensive experience interfacing with partners, factory and vendors. Vast experience in working with multi-site, multi-culture, multi-sized product development teams

SKILLS

- Tensilica (Cadence) **Audio** DSP
- Advanced knowledge of C & Data Structures.
- Working knowledge of C++, Assembly
- Linux Kernel Development, **RTOS**
- Multimedia - **Audio** & Video (Device Drivers, middleware & Player)
- IOT system side development.
- Voice – ASR interface and porting
- DSP Porting (**Audio**, Voice & Video)
- Sensor, I2C, UART, **USB**, SPI development
- Android, Linux development
- Computer Vision Integration
- Board bring-up / **Embedded** devices
- Software-hardware interactions and interfacing, low level programming.
- **Bluetooth** - HID, A2DP, **BLE**.
- Camera, MIPI, CSI, Computer Vision
- Device Software Diagnostics
- Troubleshooting and debugging
- Advanced problem-solving skills
- Performance and scalability optimization
- JTAG Debugging / Root cause analysis
- Logic analyzers, oscilloscopes
- X86, ARM, RISC, SIMD, VLIW

WORK HISTORY

2017 to

Firmware and Software **Engineer**

Amazon corporation (Alex Voice Services group) – Sunnyvale, CA, USA

- Working with the SOC vendors and helping them to integrate the Alexa Voice Services solution and come up with reference designs. (ARM including A53, A15, etc., X86 ...)
- Working with the OEM & ODMs to help them in designing the hardware, schematics review.
- Board bring-up, Linux Kernel development and Android development for customers.
- Lead the AVS C++ SDK support on various OS for the chipset vendors.
- Wi-Fi, **Bluetooth** A2DP, HID and connected **BLE**.
- Integrating the computer Vision IP in SOC and interfacing it with the camera sensor, ISP.
- Work with the Sales team and program managers to align them technically.
- Providing technical training to the customers.

2014 to 2017

Lead Software Engineer

Verizon Labs (former Intel Media) – San Jose, CA, USA

- Working on a voice box (android h/w running Android doing BF on 6 mics and sending the clean voice audio to web for ASR) which can control home devices or any connected devices part of IOT.
- Expert in taking a concept and do feasibility study and take it to production.
- Board bring-up, Linux Kernel development and Android development for Set Top Box & Voice box - Arm processor (A53 Amlogic)
- Architecting and developing framework for Media Player, Dolby certification.
- Doing the Voice search, porting algorithms on the Audio & Video DSP for low power devices for IOT.
- Bluetooth remote sending audio data and commands over A2DP, HID and connected BLE.
- Implemented the remote play (Ported Audio Video player code) for Sony PlayStation games on the STB as part of quick prototype (<https://www.gaikai.com>)

2011 to 2014

Sr Software Engineer

Intel Corporation – Santa Clara, CA, USA

- Developing Audio Windows, Linux and Android Device Driver (BSP) and Tensilica DSP firmware for x86 based tablets and phones.
- Device Driver/HAL/Middleware/DSP firmware development for Android using Intel x86.
- End-to-end development of the audio device driver and maintaining the middleware and HAL on Android. Contributed in the AAF software component (audio flinger library of android framework), which is responsible for rendering the PCM audio stream that arrives from higher layers getting delivered to the Audio HAL.
- Worked on the Offload playback of the audio decoder where the media file is decoded in the low Power DSP Chip

2008 to 2011

Sr Software Engineer

Samsung Telecommunications – San Jose, CA, USA

- Device Driver/BSP development for Android, WM7 based Smartphone device using Qualcomm's Snapdragon, NVidia tergra chipset family
- Bootloader, device driver development and porting on new chipset.
- Lead the Audio development activity with main interface to Qualcomm.
- Lead the FM Radio development activity for Silicon Lab (Si47xx)
- Worked on the Camera module for configuring the ISP and interfacing with Microsoft MDD.
- Resolved critical Power consumption issues in Audio by identifying and switching off unwanted clocks.
- Used JTAG, TRACE32 for debugging and Platform builder, Ubuntu for development.
- Linux kernel debugging.

2008

Staff Engineer

Broadcom – Santa Clara, CA, USA

- Device Driver/BSP development/Maintenance for Linux based Set Top Box device using Broadcom BCM 74xx chipset family for Dish Network.
- Solved critical bugs on Audio Video lip-sync caused by VDC delay.
- Redesigned the drivers for interrupt handling mechanism.
- Redesigned the drivers for remote control interface for RF/UHF interface.
- Closely worked with development, build and QA teams in integration and release planning

Lead Sr Software Engineer

Qualcomm – Hyderabad, India.

- Device Driver/BSP development/Maintenance for REX based QUALCOMM 6k and 7k chips.
- Lead the Audio Vocoder team (3-4 people) from INDIA and solving critical bugs from customers.
- Coordinated multi-site Audio development and BSP activity with India and US
- Wide band (16kHz) support in the QUALCOMM code.
- Worked on the multimedia framework to enable playback of vocoder encoded streams like AMR.
- Actively participated in training staff for new technologies

Sr Software Engineer

HCL Tech (Sony Ericsson) – Tokyo, Japan.

- Device Driver/BSP development/Maintenance for Open OS based mobile phone device using EMP chipset.
- Hardware debugging on the Digital circuit for activating the new IP.
- Implemented the drivers for NEC UPD993 for AAC+ decoding
- Enhanced the test application to test all possible audio paths and check their functionality

Systems Lab Engineer

ST Microelectronics – Noida, India.

- Silicon IP validation of ST OS based Set Top Box device using STM chipset.
- Device Driver/BSP development/Maintenance for ST OS based Set Top Box device using STM chipset.
- Support to the Embedded Developers in Audio Domain.
- Validating the Device for the DSP Audio Algorithms using the Audio Precision Tool and writing test.

EDUCATION

Master of Science - NSIT - New Delhi, India (Computer Science and Engineering)

Bachelor of Science - SSGMCE, India (Computer Science and Engineering)

WORK AUTHORIZATION

Legally authorized to work in the United States, no sponsorship required for employment.

ANURAG KANSAL

- Fremont, CA, US

Contact Information

- q53-uuf-mpo@mail.dice.com
- 4089229874

Work History

Total Work Experience: 16 years

- **Sr Software Engineer** Amazon Contract
Jul 01, 2017
- **Lead Software Engineer** Intel (Verizon Labs Acquired Intel Media)
Jan 01, 2014
- **Sr Software Engineer** Intel Corporation
Jan 01, 2011
- **Sr Software Engineer** Samsung Telecom
Jun 01, 2008
- **Staff Engineer** Broadcom
Jan 01, 2007
- **Lead Sr Software Engineer** Qualcomm India
- **Sr Software Engineer** HCL America Inc.(Posted In Sony Ericson Japan)

- Systems Lab **Engineer** ST Microelectronics India

Education

- **Masters** | NSIT
- **Bachelors** | SSGMCE

Skills

- I
- **audio** - 14 years
- **c** - 12 years
- **debugging** - 12 years
- **device drivers** - 12 years
- **embedded software** - 12 years
- **software** - 12 years
- **software engineering** - 12 years
- **android** - 10 years
- **bsp** - 10 years
- **rtos** - 10 years
- **linux** - 9 years
- **set-top box** - 9 years
- **stb** - 9 years
- **firmware development** - 8 years
- **leadership** - 8 years
- **dsp** - 7 years
- **framework** - 7 years
- **linux kernel** - 7 years
- **embedded linux** - 6 years
- **logic analyzer** - 6 years
- **media** - 6 years
- **arm architecture** - 5 years
- **audio codecs** - 5 years
- **c++** - 5 years
- **cro** - 5 years
- **jtag** - 5 years
- **algorithms** - 4 years
- **audiovisual** - 4 years

- **bluetooth** - 4 years
- **controls** - 4 years
- **firmware** - 4 years
- **schematics** - 4 years
- **x86** - 4 years
- **qnx** - 1 years
- **simd** - 1 years
- **video codecs** - 3 years
- **smartphones** - 5 years
- **tablet** - 3 years
- **windows drivers** - 2 years

Work Preferences

- Likely to Switch: False
- Willing to Relocate: False
- Travel Preference: 50%
- Preferred Location:
 - Los Angeles, CA, US
 - Austin, TX, US
 - San Francisco, CA, US
- Work Authorization:
 - US
- Work Documents:
 - Employment Auth. Document
- Security Clearance: False
- Third Party: False
- Employment Type:
 - Full-time

Profile Sources

- Dice:
<https://www.dice.com/employer/talent/profile/3db2ad22ce5191eac545bd9a5551935b>