Santosh Ray [](https://www.linkedin.com/in/santosh-ray-a25ab94/) [](https://github.com/santoshray)

|  |  |
| --- | --- |
| **Contact Details** | **Email /phone** |
| Santosh Ray  1320 Calle Sandcliff, Unit #40  San Diego, CA- 92154 | santosh.ray81@gmail.com  skray.sandiego@gmail.com  Phone- 1-858-260-9957 |

**Looking For**  Product Management / Software Engineering Manager role. I am keen to explore new opportunities that would help me grow professionally while contributing to success of team I work for .

**Current Role**

* Embedded Software Engineer and Technical Manager with 19+ years of Industry Experience.
* Currently leading Audio and Video Customer Engineering Team with 20+ engineers worldwide.
* Technical POC for North America Automotive customers responsible to train customer on Qualcomm Audio and Video Software stack reviewing customer design, help in board bringup , provide software customization guidance and resolve issues of varied complexity from the start of the project to product launch .

**Skills**

* Operating Systems : Windows , Ubuntu Linux , Android , QNX , AGL ( Auto grade Linux ) , Mac OS
* Embedded OS : Android , Posix Library, QuRT , QNX, REX ,RTKE
* Programming Languages : C , Python, HTML , CSS , JS (ES-6) , C++ , Java
* IDE : Visual C++ , VS code
* Tools : Trace 32 , logcat , slog2info , journalctl , Systrace , tinyalsa , ASLA utils.
* Qualcomm tools ; QXDM , QACT , QUTS , PCAT , QCAT
* Frameworks : ALSA , tinyALSA Android Framework , Django web framework
* Qualcomm Audio framework : Elite , AudioReach , Audio Lite , Audio
* Qualcomm Video : Video HAL , VPU hardware Codec,
* 3rd party Audio Framework : DSPC Audio weaver
* Embedded Potocols : I2C , I2S , PCM , TDM , UART ,
* Domain Knowledge : Audio Signal processing , Digital Image Processing , Image and Video Compression , Video Streaming ( RTSP , MPEG DASH ) , Artificial Intelligence , Machine Learning , Operating system , Embedded systems . Data Structures and Algorithms.

**Certifications [](https://www.linkedin.com/in/santosh-ray-a25ab94/details/certifications/)**

* AI Product Manager
* Introduction to Generative AI with Google Cloud
* Building a Custom OpenAI Chatbot
* Discovering Artificial Intelligence and Machine Learning
* Discovering Generative AI
* Advanced Python Techniques
* Efficient I2C Communication and Sensor Integration
* Data Structures and Algorithms
* Python programming form AI ( Ongoing)
* Deep learning (Ongoing)

**Key Features or Projects Worked .**

* Integrating Codecs G.723 and AMR NB into Audio Video Subsystem of 3G324M Telephony stack
* Implementation of Avatar feature during Live 3G video call .
* Implementation of Enhanced VTelS ( video Telephony feature ) where live streaming of .3gpp clip is performed during 3G Video Call
* Impementation of Sepia , Pencil sketch , Framing effect during Live Video call .
* Implementation of Incall Audio Feature in Qualcomm 6K series chipset
* Implementation of Audio camera concurrency feature in low cost Qualcomm Chipset
* Adding the support to decode /encode Audio in Core Sound driver for 6K series chipset
* Implementing various Codec profiles for handset ,headset , Speaker path in Qualcomm Codecs
* Contribution in the implementation of Low power Audio playback in Android Platform
* Resolved multiple Audio issues related Slimbus on Fusion Architecture .
* Fix multiple issues and make the commercialization of MBHC feature possible for first time on Qualcomm chipset
* Fix multiple issues and make the commercialization of Dual Voice Activation feature Possible on Qualcomm chipset
* Fix multiple issues and make the commercialization of Adaptive ANC feature possible on Qualcomm Chipset
* Helped in the integration of AI based Echo cancellation Algorithm .
* Helped in porting Customer Model on to Qualcomm DSP support Embedded AI Accelerator .
* Lead the effort in the commercialization of Audio features on Mobile and Automotive Platfoms.
* Ported 3rd party based algorithms in Qualcomm DSP as well as ARM .
* Customized many customer Audio Routing as per the requirement .
* Ported the A2B Stack from ADI onto GearVM ( Zephyr OS ) that does not support , dynamic memory allocation , File System operations , String functions , dynamic linking etc .

**Customers worked with**

* SoMC, Samsung , LGE , Black Berry, QNX Software , Panasonic , Google , Xiaomi ,Huawei,General Motors, Rivian , Ford , Visteon , Bose , Arkamys , Faurecia , Clarion Peiker Acoustic , Cinterion,

**Countries Travelled for Work**

* United kingdom , Sweden , Germany , Poland , China , US .

**Employment History**

|  |  |
| --- | --- |
| **Employment summary (19+ years)** | **Work Summary** |
| Philips Software India Pvt Ltd (Now named as NXP software )  **Designation /s**   * **Software Engineer (2yrs 3months)** * **Sr Software Engineer (3months)**   **Start – End date**  **July 11th 2005 - September 29th 2007** | Audio and Video Codec integration in to 3G324M video telephony stack and development of Enhanced Video Telephony .  **Skills :** C , JTAG , T32 scripts, Shell Programming , Batch file , Microsoft Visual C++ .  **OS – Windows , RTKE**  **Platform :** Sysol7210 hardware mobile Platform |
| Qualcomm India Pvt Ltd  **Designation /s**   * **Software Engineer ( 1yr)** * **Sr Software Engineering (1.5 yrs )**   **Start – End date**  October 1st 2007 - April 1st 2010 | Working in Audio Drivers integrating Mp3, AAC , WMA codec etc and Audio Codec Programming and developing Incall Audio and Audio Camera concurrency features on low cost Qualcomm Chipsets targeted for Asia Market  **Skills :** C , JTAG , T32 scripts, Shell Programming , Batch file ,  **OS –** BREW  **Platform :** Qualcomm Chipsets MSM6290, MSM6246 , MSM6270 , QSC1100 etc |
| Qualcomm UK Ltd  **Designation /s**   * **Sr Software Engineer**   April 6th 2010 - October 12th 2012 | Working in commercialization of Audio and Voice Features for Qualcomm Customers in China, Japan , Europe , US .  **Skills :** C , JTAG , T32 scripts, Shell Programming , Batch file , pyhton 2.x , Java( basic)  **OS –** Android , Linux  **Platform :** Qualcomm Chipsets MSM7x27 , MSM7230 , MSM8974 , |
| Qualcomm Innovation Center Inc  **Designation /s**   * **Sr Software Engineer ( 6months)** * **Staff Software Engineer (4 .5 yrs )** * Sr Staff Software Engineer **(2 months)**   **Start -End date**  October 12th 2012 - May 2017 | Working in commercialization of Audio and Voice Features for Qualcomm Customers in China, Japan , Europe , US  **Skills :** C , JTAG , T32 scripts, Shell Programming , Batch file , HTML , CSS , JS , Java( basic)  **OS –** Android , Linux  **Platform :** Qualcomm Chipsets MSM8992 , MSM8994, MSM8210 |
| Qualcomm Technologies Inc  **Designation /s**   * **Sr Staff Software Engineer (2 yrs)** * **Sr Staff Software Engineer/Mgr ( 5 yr +)**   **Start -End date**  May2017 - Present | Leading Automotive Audio CE Team , Expanding it World wide, taking responsibility of Video CE team and monitor the day to day activities of the Team .  **OS –** Android , Linux , QNX , Hypervisor  **Platform :** Qualcomm Chipsets SA8155, SA6155,SA8295 ,SA8775 etc , |

**Academic Profile**

|  |  |  |  |
| --- | --- | --- | --- |
| **Class** | **School / College** | **Year of passing** | **% of Marks** |
| M.Tech. | IIT Kharagpur | 2005 | 9.29/10  (CGPA) |
| B.E. | UCE, Burla Sambalpur,Orissa | 2003 | 82.69% |
| +2/Intermediate | B.J.B College, Bhubaneswar, Orissa | 1999 | 90.9% |
| 10th,ICSE | Stewart School, Cuttack, Orissa | 1997 | 88.0% |