

# SANDESH DEVADIGA S



## CONTACT

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## LANGUAGES

English – 91/120 TOEFL

German – A1(In progress)

## OBJECTIVE

I have been working for the Audio middleware and Post Processing software since 5 years, I have had the opportunity work across various hardware platforms. I am looking forward to exploring more of this. I want to put myself in the position where I can design efficient and effective embedded systems software.

## WORK EXPERIENCE

03/2020 – present

### Senior Software Engineer ( Audio Post Processing) RBEI Bangalore

- Active part of development team responsible for bringing up Audio for CCS2 project.
- Successfully delivered solution for Diagnosis of Audio route using concept of Audio loopback: Software module to check sanity of test signal through the audio path in infotainment system, apparently saving 50M in GMVCU project.
- Sound Tuning tool for General Motor(Client Server Model). Designed TCP/IP socket based Tuning client (PC tool) and Server that interacts with Signal Processing software in DSP completely from scratch: right from socket message header and various messages definition and formats, to the Server Software design in the infotainment system that will interact with DSP and middleware.
- Actively contributed in optimizing the code to exploit ILP and achieved around 50Mcps deduction on Qualcomm hexagon Dsp.

11/2019 - 02/2020

### Software Engineer (Audio Post Processing) Onsite at Robert Bosch Car Multimedia GmbH Hildesheim.

- Supported customers with bug fixes and actively involved in optimization task for ARM neon architecture (SIMD).
- Actively involved in developing Audio Signal Processing chain for GMVCU on qualcomm Hexagon DSP.

04/2019 - 08/2019

### Software Engineer ( Audio Post Processing) RBEI Bangalore

- Unit Test cases for Post processing software, developed competence in DSP algorithms in parallel.
- Studied various filter designs with focus on minimizing error in response due to quantization error of filter coefficients and increase pole density and also their implementation with fixed point arithmetic.

07/2016 – 03/2019

### Software Engineer (Audio middleware) RBEI Bangalore

- Software Module owner for handling ADAS alert requests and

generation of alert sounds.

- Active part of development team for audio middleware management software: processing Audio source requests by allocation source route, source stream, handling priority of sources, alert requests and their priorities, request for speaker diagnosis and plugins for external Bose amplifier etc.

## EDUCATION

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2012 - 2016

Bachelor Degree of Electronics and Communication, NMAM institute of technology.

**CGPA: 8.22**

**Subjects:** Linear Algebra, Multivariable Calculus, Probability, Analog and Digital electronics, Digital Signal Processing, Microprocessor/Microcontroller, VHDL and Verilog, VLSI Circuits, Embedded systems, Object Oriented Programming with C++.

## ADDITIONAL SKILLS

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- Active team player, very passionate individual and has experience in working in Agile software development life cycle. Also, experienced in working alongside colleagues across continents.
- Programming Languages: C++98, C++11, C and Python(intermediate)
- Object Oriented Programming and Software Design Patterns
- Algorithms and Data Structures
- Operating systems: Windows, Ubuntu
- Qualcomm ADSP framework and use of tools.
- Communication protocols: CAN, CCA, DBUS
- Modeling Tools : Enterprise Architect, Microsoft Visio
- Development Environment: Eclipse, Visual Code
- Requirements Management: IBM Rational Doors
- Debugging and Simulation: GDB, GProf, Valgrind, Vector CANoe
- Configuration Management: Clear-Case, GIT
- Scripting language: Bash
- Compilers: GCC
- Build Configuration: Makefile
- Unit Testing: Google Unit Test Framework
- Linear Algebra and multivariate calculus.
- Filter Design.
- Good understanding of neural network and fundamentals of machine learning principles.

## ACHIEVEMENTS

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- Appreciation from customer and GMVCU team for audio loopback diagnosis solution.
- Appreciated in department level for quick learning and contributions to Audio Post processing software.
- Awarded developer of month for quick debugging and providing fix for plant issue in Japan with premium IVI software.