

Curriculum Vitae of **AADISHRI G S**

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OBJECTIVE: To *excel* and attain *job satisfaction* in my areas of interest by means of *innovation* and *professionalism* and emerge as an asset to my organization

EDUCATION: B.E in Electronics and Communication in **UVCE - 2002-06**
(University Visvesvaraya College of Engineering, Bangalore)
Grade: Distinction (71.3%)

EXPERIENCE SUMMARY

- Total Experience : **13 years** (Sept 2006 – Present)
 - **Honeywell - Quess** Payroll (Firmware) : **Sr. Adv Embedd Engr** | Mar 19 - Present
 - **Savari** (V2X Automotive and GPS) : **Sr. Engr** | Nov 2016 - Nov 2018
 - **Aricent** (Post Acquisition of SmartPlay) : **Lead Engr** | March 2016 – Nov 2016
 - **SmartPlay** (Embedded & Wireless Division) : **Lead Engr** | July 2011 – Feb 2016
 - **MindTree – R&D** (Campus Batch - 2006) : **Sr. Engr** (R&D) Sept 2006 – May 2011
- Honeywell Fire Products Firmware - *Swift* Wireless (*Nordic*) and *SK / Farenhyt* (*Renesas*)
- Savari V2X Stack and GNSS on *Savari, Autotalks, Aptiv[Delphi]* HW
- Projects of *Intel, TI* executed in **GNSS**(Firmware)/AGNSS (AP and CP Environment)
- Lead an in-house **NFC** R&D project

DOMAIN / AREAS OF EXPERTISE

- Firmware – embOS on Renesas, nRF, Nucleus(TI), Bare-metal(MSP430), Free-RTOS
- V2X – WAVE and ETSI stacks
- GNSS: Firmware, A-GNSS – SUPL and C-Plane, PGPS, SAGPS
- NFC Technology and Bluetooth

CAREER INTERESTS:

1. Embedded Domain – Firmware and Microcontroller Engineering, IoT
2. Connectivity Domain : GPS, Bluetooth, WiFi Protocols and Modem Engineering
3. V2X / Automotive Domain

TECHNICAL SKILLS:

- Programming in C Language
- Embedded Programming, Secure-boot, Sub-GHz Wireless
- IPC - Sockets, RPC, Shared memory, Message Queues, Threads and Synchronization
- Debugging IDE/JTAG: IAR, Code-Composer Studio 4(CCS 4) , Lauterbach Trace32
- GNSS Tools: ULTS, TTCN, R&S, u-center, NMEA and UBX Encoding-Decoding

SECONDARY SKILLS

- Technologies: Bluetooth , ASN.1, IEC61850
- Open source: OpenWRT, Yocto, GPSD, Chrony, KPPS, ASN.1 Codec
- Code analysis tools like Sonarqube, Klocwork, Blackduck, Bullseye

ACADEMIC TRACK RECORD:

	SSLC (X Std)	II PUC (XII Std)	B.E (E&C)
Percentage (%)	94.24	91.16	71.38
Class	<i>Distinction</i>		
Year of passing	2000	2002	2006
School/College	SVMES, Bangalore	MES College, Bangalore	UVCE , BU, Bangalore

PROJECT DETAILS:

4. PROJECTS AT Honeywell – Firmware and Sub-GHz Wireless

PROJECT 4.2 – SK / Farenhyt Panel Firmware [MC: Renesas RX63N]

Project: SK / Farenhyt Panel Firmware Development and Maintenance

Details: New Fire-sensor support, User Account Creation and Critical Issue Resolution

- Adding support in the fire-panel for new types of smoke detectors and modules
- Debugging on IAR environment, resolving critical issues reported on field and by customers
- Implement secure login feature with safe custody and management of passwords

Duration: June 2019 – Present

PROJECT 4.1 - SWIFT Wireless Gateway [MC: nrf58240, Sub-GHz: SX1262]

Project: SWIFT Wireless Gateway Porting to Nordic – Semtech based Chipset

Details: Porting UL code from TI to Nordic MC Platform

- Interfacing UI over *UART*, trial of *Secure-boot* options - Single / Double-Bank bootloaders
- Interfacing Sub-GHz Semtech Chip with the nRF MC using native drivers on *SPI* interface
- Gradually moving the code from bare-metal to *FreeRTOS*

Duration: March 2019 – June 2019

3. PROJECTS AT SAVARI – Automotive / V2X | GNSS

PROJECT 3.3 - Savari Stack on Flex Board [GPS: UBlox M8L / M8U]

Project: V2X Development on Savari MW1000 and SW1000 with OpenWRT

Details: Leading GPS activities

- *Configuration* and update of FW of *UBlox* M8L/M8U to obtain optimum position
- PPS implementation using *KPPS* driver and *Chrony* config to achieve n-sec accuracy
- *GPSD*, *GPS Extrapolation* ,*WAVE*(BSM) and *ETSI*(CAM, DENM), *J2945*, *RSU 4.1*

PROJECT 3.2 - Savari Stack on Autotalks CRATON2 EVK [GPS: Telit SL869-V3]

Project: V2X Development on Autotalks CRATON2 EVK with Yocto

Details: Configuration and update FW of Telit GPS chip using \$PSTM commands

PROJECT 3.1 - Savari Stack on Aptiv(Delphi) board [GPS: UBX-M8030-KA]

Project: V2X Development on Aptiv(Delphi) board with QNX

Details: Savari Stack modification to achieve *J2945 compliance for UMTRI – SWRI*

2. PROJECTS AT SMARTPLAY (Aricent) - GNSS | Embedded | NFC

PROJECT 2.4 - Aricent - Intel Modem-for-Automotive Project

Project: Modem Support to Automotives with **AGNSS** - SUPL and C-Plane

Details: Providing additional AGNSS features to IMC's GNSS solution on Modem Processor for Automotives on Yocto and preparation of verification plan for GNSS module

Duration : April 2016 – October 2016

PROJECT 2.3 - Intel Mobile Communication AGNSS [GPS: Intel 7xxx Modem based]

Project: AGNSS Feature Enhancements - SUPL and C-Plane

Details: Providing **AGNSS** features to IMC's GNSS on Modem (CP) and AP platforms

- ☐ Implementation and support for GNSS in MDT and SON, TD-SCDMA, SIB
- ☐ Bug analyses from Modem/GNSS logs – Auto, MSA, MSB, MOLR, MTLR

Duration: November 2013 – February 2016

PROJECT 2.2 - NFC Controller Simulator R&D Project

Project: NFC Forum Specification based NFC Controller Simulator Development

Details: The project involved SDLC of building a *Simulated / Virtual NFC Controller*

- ☐ NFC Spec - NCI based RF State, Digital Protocol commands and Activities flowchart
- ☐ Simulated polling for NFC Tag Implementation (NFC-A, ISO-DEP, Tag 1 etc)
- ☐ Study and editing the NFC Forum specs: NCI, Digital, Activities, Analog, NDEF

Duration: February – October 2013

PROJECT 2.1 - TI GNSS Connectivity Project

Project: GNSS / AGNSS – Firmware and Host software

Details: Firmware of TI GNSS (Navilink/Wilink) and Android(Zoom/Beagleboard)

- ☐ Modularizing Firmware code by splitting the headers and the Pointer Jumptable
- ☐ Assisting the GNSS-RF firmware team to compensate chip abnormalities
- ☐ GNSS Firmware concepts like correlation, position calculation, timing, clock, RF modules, ARM co-processor, memory map, Almanac, Ephemeris etc

Tools: C, ULTS, Code Composer Studio, ETM Trace32 – JTAG debugger, Clearcase

Duration : Aug 2011 – December 2012

1. PROJECTS AT MINDTREE - GNSS | Embedded | Bluetooth

PROJECT 1.5 – RRC/RRLP Simulation tool Project [GPS: TI NaviLink and WiLink]

Project: RRC/RRLP tool to generate XML and simulate RIL

Details: The project involves using ASN.1 to XML conversion of RRLP

- ☐ Encoding / decoding GPS messages like Almanac, Ephemeris etc
- ☐ Socket/thread interfaces and callback functionalities for RIL/modem emulation

Platform/Tools: C, ASN.1 open source library **Duration :** Aug 2010 – May 2011

PROJECT 1.4 – QUALCOMM Bluetooth

Project: Certification of Qualcomm Bluetooth Products

Details: The project involves functional certification of Qualcomm BT phones with SIG

- Study of BT profiles like OPP, FTP, A2DP, HF/HS etc.
- Understanding BT protocol layers like L2CAP, HCI, RFCOMM, OBEX

Duration : Apr – July 2010

PROJECT 1.3 – Atmel STK R&D

Project: Usage of Atmel STK500 Starter Kit (AVR Studio 4)

Details: Usage of STK500 and Atmega88 to create firmware/driver for devices

- Usage of *Timers*, *PWMs* in Atmega88 , Polling and Interrupt Mode usage

Duration : Feb – Mar 2010

PROJECT 1.2 – IEC61850 Electrical Substation Protocol R&D

Project: IEC61850 Conformance Tool Development for Product Certification

Details: Design and development of IEC61850 Protocol Certification Tool.

Platform/Tools: C / Tcl , Sqlite3 and XML packages, ASN.1 Open Source

Duration : 15 months

PROJECT 1.1 – UTC – CARRIER AC

Project: Embedded Controller Application for Carrier AC Truck Trailer

- Maintenance / enhancement of an embedded controller application for Carrier AC

Duration: 19 - 20 months

ACADEMIC PROJECT 1 - BHEL

Project: Digital Input module for Serial Interface with CPU (using MC Atmel-8051)

Details: Conversion of parallel data into serial data by processing on 8051

ACADEMIC PROJECT 2 - BEL

Project: Config of 128*160*RGB Color Graphics LCD using - Moto MC68332 PCB I/F

Details: A microcontroller board was used to configure the LCD unit using Tornado IDE

PERSONAL DETAILS:

Residence : Bangalore, India

Hobbies And Interests : Carnatic Classical Music (Junior), Painting, Creative writing