

C/C++ Senior Resource Hands on Experience in Classic & Adaptive Autosar with ADAS, Software Engineering and Integration where AWS, GCP as Infra structure with multiple Domain Experience with multiple Distributed global teams.



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Senior Resource C/C++

- Strong Knowledge of C, C++, C++11/C++14 in Unix, Linux (RHEL), BSD Unix
- Classic & Adaptive Autosar Experience & Stack Understanding
- Automotive Specific Protocols – LIN, CAN, CAN_FD, FlexRay , MOST,UDS
- ISO -262262 & V Model hands knowledge for Automotive FUSA projects.
- Hands on Experience System Calls, Socket, Multithreading & Kernel internals.
- Hands On experience GDB, Wind DBG , IDA and Debugger & System Internals tools.
- Hands on Experience DevOps Tools GIT, GITHUB, JIRA, Ansible, Antifactory, Code Beamer
- ROS, Bezel Build, CMAKE, Make, Static Analysis Tools Cling , Workflow
- Hands on Experience Perl, Python, Docker, Container Shell Script as Automation Tools
- Docker, Google Cloud, AWS, Azure, AI, IOT AS DevOps Infrastructures.
- Experience in Modbus, MQTT, REST API for IOT Projects.
- Using Multithreading& Data Structure as core part in Development.
- Tools evaluation, POCs, application usability architect, Design (HLD, LLD), Product, Integration and System Testing, support, performance analysis and tuning. Thorough knowledge of all the phases of SDLC. Accountable for application performance, usability, availability, and scalability.
- Worked for SaaS (Service As Software) , BaaS (Backup As A Service)
- Implemented Design Patterns & Algorithms.
- Database Interfacing with PGSQL - with C & C++ on Windows & Linux.
- Using Multithreading& Data Structure as core part in Development.
- Experienced using STL, BOOST, GRAIL, Open Source Lib –SSH, CURL, MQTTC++ libraries.
- Experience included “HADOOP “and “Map Reduce algorithm for Signature Analysis”
- Experience in writing PLUGINS for MS-WORD / Web Browser.
- Strong experience in Install Shield for development setups of products and II party integration like Franoics Deep Freeze.
- Hands on experience on tools IBM purify, CPP optimization tool.

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Professional Experience

- Working with KPIT Bangalore as “Designer” for Autonomous Driving .
- Worked with BetSol Consultant C++ for “Rebbit” from March 19 to Sep 2019 .
- Worked with Harman Connected Services as Architect Product Development from 14 Sep 2015 March 19.
- Worked with Quick Heal Technology R & D Tech Lead – Senior Treat Engineer from Feb 2015 - Aug 2015.
- Worked with ICTECT Inc. as Senior SW Engineer from Aug 2013 - Feb 2015.
- Worked with IGATE Computer Pune HDC as Senior SW Engineer form Aug-2010 – Aug 2013
- Worked with Wesley Clover Communication Private Limited as Senior Software Engineer (Mar 2010 - 15 Aug 2010).
- Worked with Ideacts Innovations Pvt.Ltd as Senior SW Developer. (Mar 2008 - Feb 2010
- Worked with Seed InfoTech, as a Senior Subject Matter Expert (Nov 2005- 18 Feb. 2008)

Education Details

- M.Com (Computers, Management) RDVV Jabalpur M.P 59% Year 2005.
- B.Com (Commerce) RDVV Jabalpur MP 55% year 2003
- HSC (10+2) KV OF Katni (M.P) 2000 59 % Year 1998
- SSC (10th) KV OF Katni (M.P) 1998 55% Year 1996.

Certificates

- Master’s in data science & AI
- Certified Scrum Master (SCM)
- GCP Core Infrastructure, Big Data & Machine Learning, Application Development in GCP
- Google Cloud Platform for Amazon Architect.
- DCA Diploma in computer Application MCRP Bhopal 62.32% Year 2000.
- PGDCA Post Graduate Diploma in Computer Application 72% Year 2004
- C/C++ from YashwantKanitkar Year 2001.

Training Attended

- Embedded Systems Shape the World – Microcontroller & Input, Multithreading & Interfacing using Cortex -M Microcontroller (TM4C123 -EK-LM4F120XL and EK-TM4C123GXL LaunchPads) by Texas Instruments.
- Autosar & System Engineering Automotive
- FUSA (Functional Safety ISO26262) Duration 1 month
- Design Pattern C++ Duration 3 Days. 2018
- Linux Device Driver Duration 3 Days 2018
- Design Pattern Java Duration 3 Days 2017
- Python – Duration 3 Days 2017

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Projects

- 1. EHR [Jan 2021 ->Till Date][Designer]:-** Electronic Horizon Reconstruct or working as Senior resource . Core responsibilities for writing PD /PI containers they are application used in Autosar /ADAS Stack for Inter communication with various Vendors with Same Implementation, In EHR- this help to create the map and prediction using ADASIS map Library , Helps the Driver to know what is the situation of traffic fwd 5 KM and Backward 2 KM and use for decision making to find the best path in Autonomous Driving , This application works on Devnerton Environment . Application interfaces with Multiclient , MadMapLibray and DataBase PGSQL ,Communication Layer.
 - EHR PI (Platform Independent)-PD (Platform Dependent) implementation .
 - ADASIS – message understanding and how it can be pass using Message Queue.
 - Implementation of new interface in between PI and PD container
 - Wring / Generating Interfaces using python framework and integration with C++ .
 - Technologies C++11/C++14 , Python , Jayson ,PGSQL ,CMake , Antifactory ,Docker.
 - GTest and WCS (Worst case Scenario) ,Cplint , GCov for code analysis.
- 2. Thunder [Oct 2019 ->Dec 2020][Designer]:-** As a Senior resource, I envisage interaction between automotive and ROS platform. I contribute to defining interfaces and signatures, as well as implementations for components which are consumed by applications developed for Autonomous Driving using C++ 11/14, Work with the best of the software engineers in autonomous driving domain to realize Highly Automated Driving features on road Using software craftsmanship in a Large-Scale Scrum (LESS) framework with Strong software engineering principles (object-oriented programming, functional programming, using SOLID and DRY).
 - Modules -like EDR , EDC, mPad , hPad new feature Design and Implementation.
 - Understanding Autonomous Driving requirement & Architecture of Thunder Framework
 - “Nautilus” Understanding the Middle layer for multiple OEMS.
 - Understanding Different Area in Autonomous Driving A to X
 - Using C++ 11/ C++ 14 for implementation & Design
 - Bezel Build, Code Beamer, static analysis tools (Klocworks , Clin) for Build Process,Git.
- 3. Subaru Support for FUSA Veoneer[Oct 2019->Jan 2020][Senior Resource]:-** ADAS ECU firmware SW safety requirement (ISO26262) writing for Veoneer Propriety Hardware, Hardware include FPGA (Image Processing) Xilinx ZU5 MP Soc and Infineon TC397 & Camera. We need to write the SSR related to components, after writing the SSR that need to be verified with Software Design and Hardware Design.
 - Understanding Functional Safety (ISO26262) for Hardware & Functional specification.
 - Safety Requirement and GAP analysis for the components.
 - Writing SSR for the Microsar and VP (Visual Processing) components.
 - Check HIS Compliance with Firmware SSR and refine HIS if there are any gaps and violation of TSR's
 - Software Safety Architecture Verification against the written SSR.

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4. Rebbit-Pro [March 2019 ->Sep 2019][Associate Technical Consultant]:-“Rebbit Pro” provides a versatile backup software that lets users backup data on the cloud , local drive and Network Drive it offers a simple user interface and great flexibility it’s a non-intrusive continuous robust backup and restore solution.

- Upgrade OpenSSL 1.0.0 to OpenSSI 1.1.0f .
- Modifying Upgrading CMake 2.8 to 3.2 for 32 bit and 64 x86 & x64 Architecture.
- Interfacing C/C++ code with AWS using AWS C++ library.
- Used Perl , Innove – for Build Setup for setup Development .
- Wipe – Disk Wipe Research & Analysis for Disk Wipe tools – so user profile can be upgraded with New Machine and Data can be total cleared by using Forensic Tools. So data cannot be recovered.

5. Samsung SDS Nexshop[Nov 2018 ->Mar 2019][Architect Product Dev]:- it’s the IOT Product by Samsung SDS – for BS (Behavior sensing) . Nexshop Behavior Sensing Supports Marketing activates by collecting and analyzing Customer Behavior Data. This includes Face Analysis, Heat Map, Dwell Time, Zone counter, People Counter, Data Analytics. This Product use AXIS – Camera and PILOT.AI engine for Analysis. Devices (Camera) uses – Open Source Lib – like Open SSH, CURL , MQTT and property Pilot.AI library for Analysis.

- Designing New Modules –like Update feature, Reboot, Restart Application.
- Consuming “REST” API and Integrating at Device Side.
- Creation of Setup using Install Shield 2018
- Designing IPC layer, Data layer for sending data to server”
- Understanding Axis Camera &Nex Real Camera and deploying code.
- Using Rest API, MQTT , Open SSH , CURL and Cross Compiler for Code Building.
- Creating Setup –using Install shield 2018 – for PC Client.

6. NetVault Elastic Search Integration[Jan 2018 -> Oct 2018][Architect Product Dev]:- it’s the Data Backup Recovery Enterprises application ,used for backup recovery for Enterprises data – current role and duties – working for integrating “Elastic Search” in our product, this integration will help in search capabilities of – “savesets” while creating Restore Jobs. User can find/search “files dir” using various filters in GB’s of Data. Now the user have smoother experience in searching mechanism - as well as now “Restore Job” will be created and Executed mush faster than earlier Mechanism.

- Designing New Modules Catalog Manger ,Catalog Worker for “Elastic Search”
- Consuming “REST” API and Integrating with Netvault & “Elastic Search”
- Database connectivity – with PGSQL and the “Elastic Search” Database.
- Installation & Integration of Elastic Search with Netvault.
- Designing “Messaging” IPC between Netvault modules and “Elastic Search”
- Used C/C++,Data Structure (Tree ,List ,Messaging)JSON,and REST API

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7. **Harman Speakers [Harman Connected Services Feb 2016 –Dec 2016][Role Architect Product Dev]**:- Interfacing Speakers with Raspberry PI , wifi , modbus , Grid eny , to understand the customer choice that which model is preferred and how long time spent during looking the speacfic Speaker Model, this give the preference that what is the choice of the customer and which model they prefer in the set of various Harman Speaker Models .
 - Designing Hardware specification & Application Design.
 - Understanding pay load how data can be collected by speakers and sent to the Azure UI using AZURE SDK –“C” using REST ,MQTT
 - Interfacing WIFI , Rasberi PI , Harman Speakers , Grideye, ModBus for Model
 - Technologies Uses – C, MQTT, REST API ,JSON using Azure AS infrastructure.

8. **Entrust – Edge Device Authentication using Entrust CA ,SUB CA and IOT Infrastructure[Harman Connected services 15 Sep 2015 Jan 2016][Role Architect Product Dev]**:- This IOT framework used for the integration for varius Edge Device connected to the network , Each Edge device Aunthenticate it self when it comes in the Network and does the Hand-Shaking and Security Certificiate updates and then start the communication with server , this infrastructure help to provide IOT solution with Security with Heavy Data Payload .
 - Understanding dependencies of Edge Device , finding how the Multiple Devices can be integrated in home network .
 - Generating Security .Pk certificate on fly by using Propriety Entrust Lib and SDK .
 - Creating Docker Containers and Deploying as Edge Devices and communication.
 - CI Process Integration using Jenking, Docker Hub, JIRA, Pupet , Artifactory & tools
 - Used C/C++/Java , Docker Script , CI tools ,Entrust SDK, Azure As infrastructure.

9. **AGE (Automated Generic Signature)[Quick Heal Mar-2015-Aug 2015][Role Senior Thread Engineer]** :- it's the R & D for philosophy how we can automate the polymorphic behavior of samples , to find they are malicious or not it's the Signature base detection to find the malicious samples , This help to remove the physical man force for static and dynamic analysis for samples. This project used “HADOOP” and “Map reduce Method “For the analysis and signature generation process.
 - Understanding HADOOP module that how Data is processed and implements MAP reduce method, how it can be used for the malicious samples set.
 - Using AMCS (Automated Malware and Classification Clustering System) making decisions how the various samples are collected and classified further for L1 / L2 support so detect infections signature can be easily written for various threats.
 - This module include python script, Perl script for automation various sub modules are written using this I am responsible to maintain modules & enhancement.
 - Analysis for False Positive what decision should be made when false positive found during the whole process.
 - Debugging Python Modules, Perl modules documentation technical mentoring.

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10. **IDA Plugin[Quick Heal March 2015 –Apr-2015][Role Senior Threat Engineer]:** - IDA Pro Writing IDA plugin to finding Basic Blocks and Matching with Database it includes Boost Lib, IDA Scripting. This plugin help to verify that the selection “disasm” chunk belongs to clean database or not, if not then it is the malicious sample. This plugin is used while sample analysis during L2 support.

- Understanding Module for Clean and Malicious Samples and finding the AREA in exe where can be the malicious chunks
- USE tools like HEX, IDA Pro, Total Commander, CFF explorer, BTONE for static and dynamic analysis
- R & D for samples how easily can be used for Automation to generate static and Dynamic Analysis.
- Team handling for 5 peoples for Automation for internal GUI portal call MRS to display the reports for samples, family wise count wise chart wise.

11. **WorX –MS-Word Automation[IctectInc Sep 2013 – Feb 2015][Role – Tech Lead]:**-Major role as a Technical lead this is C++ engine which provides MS Word Plugin Expose various custom controls to modify word document. User can select the Paragraph, make the formatting functionality, can do tagging, can search various contents

- R & D How those methods works internally and implementing the same with the help of C# as well as C++...
- Using DOM C++ Parser for XML.
- Using Boost C++ library for heap Management, Queue.
- Using GRAIL C++ library for the Regular Expression/ STATE MACHINE implementation
- Using GRETA C++ Microsoft library Regular Expression.
- Using COM/ALT for creating the lib and exposing the methods to the C++ / C# client.

12. **MRI –Toshiba Medical devices and Machines[IGate Aug 2010 – Aug 2013][Role Senior Software Engineer]**

Major role as a Team Lead, Code Reviews, requirement analysis with other modules, working for code optimization, debugging, includes taking care of installation of BSD Unix and System Setup for the CI process. Maintenance, Enhancement System Utilities Module, which has no of system libraries like log library, voice manger, database library, parsing library.

- Using BSD Unix for Interfacing with window OS installation and Troubleshooting.
- POC for Process Management and Hardware Optimization.
- Managing Core Library, bug-fixing enhancement.
- Code Porting from VS 6.0 to VS 2008.

13. **RSM (Remote Service Manager)[Wesley Clover Mar 2010 –Aug 2010][Role Senior Software Engineer]**Working as Senior Software Engineer – this product is written from scratch by doing reverse engineering of already stable project “LogMe In” This product have multiple platform support Windows / Linux . By Using, this product user can take the remote of any machine and can perform the entire Administration task.

- Writing Libraries provides the system dll / modules list.
- Using RDP remote Desktop protocol for Desktop Sharing.
- Using WMI (windows management instrumentation) for getting system information.

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14. CLINCK DESKTOP [Ideacts Oct 2009 – Feb 2010][Role Senior Software Engineer]– It's the cybercafé product, running in windows machine cybercafé owner will install this application – while launching this application this provide the Desktop same as windows – with icons and shortcut as well as Embedded ActiveX Control of Internet Explorer. This Active X controls holds the ASP page – which has no of tabs – and each tab has no of advertisement – we call this as “campaign” when user click on this campaign this divert the link to the given product . In addition, this click we stores in the ini file – which key factor for the product.

- Analyzing the requirements of the product.
- GUI implementation for Dialog Box and Active X control.
- Designing implementation, various modules like INI reader, handling IPC using shared section between tow .exe, command line processing between various processes.
- Shell Programing for creating same look and feel as windows “Desktop”

15. CLINCK TOOLBAR (FOR IE AND MOZILLA)[Ideacts June 2009 –Sep 2009]:-It is same as GOOGLE and MSN tool bar, which can display the links and combo box, which provide the search option for Google, as well as tabs for various links, which sends the CLINCK to server for the Revenue generation.

- Coding for the tool bar integration
- It is made up of IBand Interface which is basically the COM component , which helps to crate the tool bar or tool band of IE ,
- For Mozilla XPI file integration (it's the format which helps the moziall to add ADD - ONS which help to add tool bars as well as button or customization for Menus .
- Registry entries for hiding or unhiding all the tool bars.
- CLIENTS are Yahoo, Google

16. FLI (Folder List integration)[Ideacts Jan 2009 May 2009][Role-Senior Software Engineer]:-This is pure windows shell programming , in which screen has to convert in to the windows Desktop, the integration is on dialog box application which holds the Shell Folder list, and displays the same Desktop items, user can perform all the operation same as Windows Like create shortcut, folder, copy , paste operation and further enhancements.

- R & D inn windows shell structure and internal working
- Code compatibility in win-98 ,win-2k,win-xp
- Core Coding for the module, and enhancement bug fixing
- Testing the module with VM-Wares with multiple Window OS (version)

17. Install Shield 2008[Ideacts March 2008 -Dec 2008][Role Senior Software Engineer]:

Install shield is used for creating the setups of the various application, I have used it for creating the setup of CLINCK, CYBER CAFÉ MANAGER, MULTIMONITOR project writing the Install shield script deigning various customize dialog box. As well as integration of the third party product like Franoics Deep Freeze with our products and calling various C++ Dll from windows applications. And heavily used the registry stuff.

- Writing the install shield scripts for all the setups
- Customize Dialog Deigning as well as control handling.
- Calling the C++ /MFC DLL from the install shield script for integrating our product with the setup.
- Heavily used the Registry stuff for the System Hacking, and Hooking Purposes.
- Il party Faronics DEPP FREEZE integration for the products

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18. Corporate Trainer [Seed InfoTech 8 Sep 2005 to Feb 2008] [Role – Senior Matter Expert]:-

Conducting Training for C,C++,MFC,COM,ATL for Corporates – working as Senior Matter Expert this includes Creating Course Contents , Assignment Creation , Candidates Evaluation ,Paper Settings .

- Conducting Corporate Trainings
- Customize Project Wise Course Content Designing.
- Assignment evolution and Designing.
- Conducting Train the Trainer Programs –for Juniors Faculties.