KULDEEP PIPALIYA
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Objective: My Goal is to play pivotal role and get more challenging position within a dynamic and innovative organization.

Synopsis:

- 3+ years of experience in Bootloader software development
- 4+ years of experience in Embedded C software development
- Knowledge of Diagnostics protocols: UDS, KWP and XCP protocol
- 1.5 years of Working experience on 32-bit Freescale Microcontrollers (MPC5604P)
- 2 years of Working experience on 32-bit Multicore Infineon Microcontroller (TC27x, TC23x)
- Knowledge in Drivers like Flash Drivers, ADC, PWM, PLL, SPI, Timers, Ports, Watchdog. Awareness in File Formats like hex/s-record, cdd, dbc etc
- Working with Tools like CANoe, Kvaser etc
- Excellent Debugging Skills and hands on experience in Firmware Debugging Tools like Trace32
- Good Problem Solving and Analytical Skills
- Worked in configuration management tools like SVN

Technical Skills:

Operating System	Windows 7/XP
Programming Language	C
Processors	16-bit/ 32-bit FreeScale Controller, Infineon Tricore TC27x
Tool	CANoe, Kvaser, EB Tresos, SVN, Synergy
Protocol Knowledge	CAN, J1939, UART, SPI, basic knowledge of Autosar, Diagnostics protocols UDS and KWP
Debugger	Trace32
Compiler	CodeWarrior, Green Hills, tasking, Mingw

Experience:

Organization	Duration	Role	Domain
KPIT Technologies	Dec 2016 – Till Date	Sr Software Engineer	Power Generation - Embedded
Magneti marelli India	Aug 2015 – Oct 2016	Sr Software Engineer	Automotive - Embedded
Mando Softtech India	Dec 2013 – July 2015	Engineer	Automotive - Embedded

Projects:

Organization	KPIT Technologies		
Client	Cummins India Ltd.	Project	HMI
Period	1 year 8 months	Duration	March 2017 - present
Role	Senior Software Engineer		
Project Description	This project is related to HMI display for Cummins Generator. HMI software is combination of easyGUI application generated code and hand-written code. HMI screen design happens in easyGUI and hand-written code provides actual handling (navigation and parameter handling) of HMI screen.		
Contribution	As a Software Engineer: - • Work on HMI Software: - Non-Volatile parameter handling (NVM Auto reset issue fixed), Fault code and User Programmable Fault text handling, Scripting language code(HMI211), Edit operation of numeric, string or Enumeration • HMI screen design tool(easyGUI): - Added Edit and Data screen, Index structure Handling, Handling of different language builds from one GUI file • Code compilation process • Unit testing As a System Engineer: - • Worked on complex Genset functionality like HMI-PCC Sleep mode • Documentation work: Approach doc, Test plan, System design doc update, Weekly tracker • RCA (Root cause analysis) and its documentation using 5 why method • System testing • Design review Process – Prepare ppt of ECR Work done for Production release and approve the same ppt from Chief Engineer • Follow process of ECR lifecycle to ensure product quality		

Organization	KPIT Technologies		
Client	IN House	Project	On Batch
Period	3 months	Duration	Dec 2016 - Feb 2017
Role	Senior Software Engineer		
Project Description	This is Electrical vehicle charging Project. CAN and GBT standard is used for communication between charger and Electric vehicle. Charger and Electric vehicle need to be replaced by GBT 2015 over GBT 2011 standard.		
Contribution	• Analysis of the project requirement • Understanding of GBT protocol • Design Change document: Gives difference between GBT 2011 and GBT 2015 • Design of Code Flowchart • Code Changes: Implementation of Handshake stage, Addition of required PGN and SPN • Code compilation, debugging		

Organization	Magneti Marelli India		
Client	IN House	Project	Automotive Bootloader Development and Communication Protocol Development
Period	1 Year 2 months	Duration	Aug 2015 - Oct 2016
Role	Senior Software Engineer		
Project Description	Bootloader made up of two layers – Driver layer and communication protocol layer. Scope of this project was to design and implement a CAN communication based generic Bootloader for automotive system, with integration of XCP and UDS protocol in communication layer. Bootloader uses CAN and UDS protocol to communicate with external CAN node or tool. After power on reset, the bootloader shall first read the EEPROM memory and jump accordingly to the specific memory location. Bootloader can Flash the Application and calibration files, Read and write on NVM memory. Mmarte tool used to flash application and calibration files.		
Contribution	• Integration of XCP protocol within Bootloader communication layer • Understanding of XCP protocol • Development of XCP commands and integrate them with drivers • Making of unit test report and preparation of detailed design document		

Organization	Mando Softtech India Pvt Ltd		
Client	IN House	Project	Development of CAN Based Bootloader for Infineon Tricore Based Controller
Period	1 Year 7 months	Duration	Dec 2013 - July 2015
Role	Engineer		
Project Description	Scope of this project was to design and implement a CAN based bootloader for Automotive Brake system. Infineon's Aurix microcontroller TC27x was used in this project. UDS diagnostics was implemented in this bootloader. Bootloader uses CAN and UDS protocol to communicate with external CAN node or tool. During development phase, CANoe tool has been used to validate the UDS services. The Bootloader shall jump to application, if the application is valid. If application corrupted then bootloader run its UDS diagnostic services to download latest application from Flashing tool. The application get flash using a Mando Brake tool.		
Contribution	• Analysis of schematics diagram and configuration of ports • Implementation of external and Internal watchdog • Development of Flash Drivers and writing Kernel Logic and its deployment to memory • Developed UDS and KWP diagnostics services and integrated them with firmware layer • Develop diagnostic layer and diagnostic handler • Making of unit test report and preparation of detailed design document		

Organization	Mando Softtech India Pvt Ltd		
Client	IN House	Project	Migration of CAN Based Bootloader to Autosar architecture
Period	4 months	Duration	Feb 2015 - May 2015
Role	Engineer		
Project Description	Scope of this project was to integrate/replace BSW layer of Autosar with Infineon driver layer. Infineon based controller Aurix TC23x was used for this project. Modified UDS and CAN layer function calling as per BSW layer requirement and integrate UDS services and error handling.		
Contribution	• Fundamental knowledge of Autosar layered architecture • Hands on experience on Tresos tool • Test UDS diagnostic handler, flashing & erasing operation after integration of BSW layer • Design and Implementation of UDS Services • Prepared Unit test report and software design document		

Educational Qualification:

Sr No	Standard	University	Percentage	Academic year
1	BE in E&C	GTU	8.14	2009-2013
2	12th	G.S.E.B.	71.80%	March-2009
3	10th	G.S.E.B.	80.62%	March-2007

Additional Certifications:

Certification	Year	Institution
PG Diploma in Embedded System	2013	Vector India

Academic Project Detail:

OMR SHEET RECOGNIZATION

- 8051 microcontroller and IR sensor used to check OMR sheet
- Printer Hardware integrated with stepper motor to automate paper change process
- Visual Basic application used to prepare database which generate obtained mark report of all students

Personal Information:

Nationality	Indian
Permanent Address	'SHREEJI KRUPA', Radhanagar-1, Rajkot, Gujarat, 360 004
Sex	Male
Date of Birth	21th December 1991
Marital Status	Married
Lingual Skills	English, Hindi, Gujarati
Hobbies	Watching movies, play outdoor game for refreshment, Drawing sketch, Dance

Declaration:

I hereby declare that all the above information furnished by me is correct to best of my knowledge.

DATE:11-11-2018
PLACE: Pune

(KULDEEP PIPALIYA)