Neelima Gorre

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Objective:

To work with an organization that gives me scope to enhance my knowledge and skills using the latest technologies and to be a part of a team that can dynamically work towards the progressive growth of the organization.

Experience Summary:

- Having Total Experience of 4.6 years in Automotive and Motor controlling application Domain as an Embedded Software Developer**.**
- Currently working as a Bootloader Software Developer in **ZF-TCI**, Hyderabad,India.
- Having 1.8yr Experience as **Bootloader Developer in ZF-TCI.**
- Having 3 years Experience as **Motor Controlling Application Development in VEM Technologies** in Hyderabad, India.
- **Responsible for Bootloader Software Development and design of Automotive Breaking (DUAL Controllers)** Projects for the **product lines of BMW SBM.**
- Worked for the Development of the CAN Communication for the TC27X platform-based **STEER BY Mechanism technology.**
- Had worked in development and complete delivery of the **Steering Bootloader Software of Infineon 27x, 37x Controllers.**
- Having Experience in **UDS, CAN.**
- Having Experience on **UDE Debugger.**
- Having Experience on **Rhapsody Design.**
- Having Experience on **Static Analysis using Polyspace.**
- Having Experience in **Vector Cast Unit Testing.**
- Having Experience in **Tasking tricore for Complilation.**
- Having Experience in **Code composer studio for developing and compilation.**
- Having Experience in Version Control Tools like **Smart-GIT and Integrity.**
- Having Experience in **Canalyser tool**.
- Having Experience in **C and Embedded C.**
- Having Experience in protocols like **I2C, SPI, and UART.**
- Experienced in ADC, DAC, ECAP and EPWM, module programming.
- Hands on experience design & developing firmware for TMS Controllers.

Strengths:

- ❖ High commitment towards the assigned responsibilities.
- ❖ Highly motivated and ability to handle multiple responsibilities concurrently.
- ❖ Zeal and quick to learn new things.
- ❖ Good communication, analytical, interpersonal and presentation skills.

Educational Summary:

S.NO	COURSE	INSTITUTION NAME	YEAR OF PASSING	AGGREGATE
1	B.Tech (EIE)	Bapatla Engineering College, Bapatla.	2018	79%
2	Board of Diploma (EIE)	Govt Institute of Electronics, Hyderabad.	2015	75%
3	S.S.C	ZPHS - Miyapur, Hyderabad.	2011	84%

Certifications:

- **ISTQB** Certified.

Projects:

1. **Project title: ZF- Bootloader Projects**

Period: June 2023 to Till now

Tools used: Eclipse, Integrity, Smart-GIT, UDE, Canalyser, Rhapsody, Polyspace, VectorCast.

Client: ZF(BMW NCAR SBM)

Description: Bootloader is the Major Software to update or link the Application, Functionality or Feature to an ECU in the Automotive with the ISO standards. As per the Requirements the Bootloader Development in the Embedded C language needs to be done. Further Procedure like Debugging, Bench Test Reports are followed with Quality Activities like Static Analysis and Unit Testing.

Role: Bootloader Developer

Responsibilities:

- Design and development of Bootloader Software .
- Confidence Test is Done before Software Delivery.
- Rhapsody Design is done for the Software modules.
- Static Analysis and unit Testing is Done for the Generated Code.
- Participating in Customer Review meetings along with team .

2. **Project title: Three axis Rate Table.**

Tools used: Code composer studio, 100XV3 Hardware JTAG, and Texas Development boards.

Client: DRDO

Description:

The three-axis rate table is a project which includes three brushless dc motors to be controlled accordingly with the required input rate. So three motors are azimuth motor, elevation motor and other is a roll motor. The three motors are controlled and tuned using closed position loop control algorithm with the help of encoders as feedback. The motors have their corresponding degrees of freedom which need to be controlled perfectly by controlling through commutation. The command

will be read through uart communication from a graphical user interface and then applied to the motors. The rate feedback with position feedback will be updated to the GUI through uart communication. The aim of the system is to hold a particular object and rotate in all three axis so that the object axial behavior can be recorded and analyzed.

Role: Developer.

Responsibilities:

- Initialization and configuration of microcontroller peripherals Timer, Uart, Spi, Adc etc.
- 2. Reading analog command and updating Feedback by UART to Graphical User Interface.
- 3. Implementing the code for sine commutation to rotate the three motors.
- 4. Reading the encoder values by establishing SSI communication.
- 5. Controlling the motors position and rate loop by control system algorithm.

3. Project title: Electrical Encoder.

Tools used: Code composer studio, 100XV3 Hardware JTAG, and Texas Development boards.

Client: VEM Technology own product, to know the Motor position puropose.

Description: Encoder is specially used to get the position information of rotating or linear devices. Electric Encoder is a rotary encoder developed to get the correct absolute position of any motors and used for controlling closed loops. Using TMS320F28069 microcontroller able to find the absolute increment positions through a mathematical M&N algorithm by reading the analog sine and cosine signals through ADC. The absolute position is 19 bit accuracy. By proper Scaling of electrical analog signals and converting those to digital data then by processing these digital data by specific quadrature-based algorithm, able to find out the absolute angle of the rotor.

Role: Developer

Responsibilities:

1. Initialization and configuration of microcontroller peripherals ADC, GPIO, UART &SPI.
2. Developing M&N algorithm to find the absolute angle and communicating to Graphical User Interface and other device.

4. Project title: Ventilator

Tools used: Code composer studio, 100XV3 Hardware JTAG, and Texas Development boards.

Description:

Ventilator system is meant for cooling of electronic equipment mounted in the article. The system is built with Brush less DC motor and solid state electronic control system. The system provides drive to meet a min speed of 2600rpm. It operates at supply voltage of 28V provided by the on board DC supply of the missile. Ventilator system has to be rotate at rated speed once powered ON. This can be achieved by increasing the amount of current to BLDC motor. The Ventilator is operated at constant frequency 900Hzs, the input supply voltage is may vary from 24v to 32v, but frequency is should be maintained as constant. The ventilator frequency is based

on closed loop is designed by taking the Hall sensor as feedback. The ECAP's is used to capture the hall sensor frequency and calculate the corresponding frequency from the hall signal.

Role: Developer

Responsibilities:

1.Initialization and configuration of microcontroller peripherals ADC, GPIO, Timers, Ecaps, and Epwms.

2. Reading analog command and updating Feedback by using Hall sensor.

3. Implementing the code for Hall commutation to rotate the single motor.

4. Reading the Frequency by using Ecapture module.

5. Controlling the motor rate loop by control system algorithm.

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