

# PALLANTI SAI SANKAR

EMBEDDED SOFTWARE DEVELOPER

3 Years of Experience as an Embedded Software Developer. Involved in design and development of various systems and proficient in various platforms, languages and embedded systems. Currently working on Electro-mechanical drive systems as a software engineer.

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## **PROFESSIONAL EXPERIENCE:**

- 3 years' experience in embedded software domain, currently working as a Software Engineer in **VEM Technologies Pvt Ltd, Hyderabad** from April 2022 to till date.
- Worked as a Hardware Engineer in VEM Technologies Pvt Ltd, Hyderabad from May 2011 to March 2022.

## **PROFESSIONAL SUMMARY:**

- Good Programming knowledge in C and Embedded C.
- Experience in SHARC processors ADSP 2136x family programming.
- Experience in Micro Controller TMS320F2837XD family programming.
- Experience in Communication protocols such as SPI, I2C, RS232, RS422, CAN etc.
- Experienced in ADC, DAC, PWM modules programming.
- Working experience on MIL-STD-1553B protocol and ARINC 429 protocol.
- Working experience on Incremental & Absolute encoder interfaces designs.
- Having very good experience in Hardware Electronics circuits testing, debugging and problem analysis.
- Experience in sensors like LVDT signal conditioner, Current sensors, Hall sensors etc.
- Good working experience with BLDC motors and actuator systems.

## **EDUCATION:**

- Pursuing **Master of Technology - Embedded Systems** in BITS PILANI.
- P.G. Diploma - **Embedded systems** course  
Radar Technologies from Bangalore.
- Bachelor of Technology - **Electronics & Telecommunication Engineering**  
A.M.I.E.T.E from Delhi
- Diploma - **Electronics & Instrumentation Engineering**  
S.M.V.M polytechnic from Tanuku.

## **PROJECTS:**

### **PROJECT #1: DUAL CHANNEL LINEAR ELECTRO-MECHANICAL ACTUATOR**

**Languages** : Embedded C  
**Microprocessor** : ADSP2136x Micro Processor  
**Tools** : Visual DSP++, CCES

#### **DESCRIPTION:**

The Dual Channel Linear Electro-mechanical actuator is used to control the direction of the missile in the pitch and yaw directions. The Electronics module consists of ADSP 2136x processor, which is designed to control the motion of the mechanical actuator that is directly connected to the BLDC motor. The Control Electronics is used to receive the control commands through the On Board system and compute the feedbacks, thereby drive the 3-Ø Brush-less DC motor.

#### **Roles and Responsibilities:**

- Working on software requirements derived from system requirements.
- Design and development software to drive the 3- Ø Brush-less DC motor and control loops.
- Implemented the driver software's for on board modules like Processor configurations, ADC, DAC, UART, FLASH, Watch Dog Timer and MIL-1553 etc

### **PROJECT #2: ROTATORY SERVO CONTROLLER**

**Languages** : Embedded C  
**Microprocessor** : TMS320F283xD Micro Controller  
**Tools** : Code Composer Studio

#### **DESCRIPTION:**

The Rotatory servo controller is used to control the fin's direction. The Electronics consists of TMS320F283XD micro controller, which is designed to control the 3-Ø Brush-less DC motor. The micro controller receives the control commands, senses the encoder's feedback and computes the error there by generate PWM signals to run the motor.

#### **Roles and Responsibilities:**

- Working on software requirements derived from system requirements.
- Design and development software to drive the 3- Ø Brush-less DC motor, encoder's feedback collection and control loops.
- Implemented the driver software's for internal modules like PLL, ADC, DAC, UART and PWM, SPI etc

#### **Declaration:**

I hereby declare that the above written particulars are true to the best of my Knowledge and belief.

Date:

Place: Hyderabad

(P SAI SANKAR)