# KARANAM VENKATA SREERAM



# **Automation Engineer**

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#### **OBJECTIVE**

Organized and highly motivated professional with passion for technology and a strong interest in working with process systems. With a solid educational background in automation and control, electrical engineering, I intend to drive innovation and ensure seamless execution of automation projects with a dynamic team. I bring curiosity, discipline, and a comprehensive understanding of diverse electrical instruments, PLC programming to get reliable and high-quality results, thus achieving the company's ambitious goals.

#### PROFESSIONAL SKILLS

- Automation & Control: Comprehensive knowledge of automation and control systems used in wide range of processes, including process control loops, instrumentation, and safety systems.
- **Process Optimization:** Ability to optimize production processes by deploying numerical optimization techniques to decide setpoints for various control loops, thus ensuring efficiency, quality, and safety.
- *PLC Programming:* Ability to program PLC's, configuring I/O modules, creating ladder logic, and structured text for automated equipment and processes.
- *Data Analysis:* Analytical skills to assess and analyse MES, DCS data using diverse machine learning techniques such as clustering, time series analysis and regression analysis.
- MES, SCADA & DCS: Brief understanding of the principles and functioning of Distributed Control Systems (DCS) and Supervisory Control and Data Acquisition (SCADA) Systems. Knowledge regarding OPC server, communication protocols such as Profinet, HART etc.

#### **EDUCATION**

Control and Automation - Aalborg University, (Masters).

2022

Grade: 9.3 GPA

Masters Thesis – Machine Learning and UKF based Indoor localization using Ultra Wide Band (UWB) sensors

- Accurate positioning of robot using Ultra Wide Band sensors
- Classification of Line of sight and non-Line of sight conditions using DNN and SVM.
- Kalman Filtering to improve localization in case of NLoS conditions.

Electrical Engineering - IITRAM, India, (Bachelors).

2020

*Grade:* 8.08 GPA

Undergraduate Thesis – Design of Flight Controller for Drone using sliding mode control

- Mathematical Modelling of Drone
- Design of Flight controller on PCB
- First Order Sliding Mode controller

#### PERSONAL SKILLS

- Collaboration & Teamwork: Ability to collaborate effectively with colleagues in a dynamic, multicultural, cross-functional teams and work towards collective goals.
- **Problem-based Learning & Problem Solving:** Based on the problem, theory is learnt and apply the same to solve the issues. Can think creatively to overcome challenges and propose innovative solutions.
- Attention to Detail: Meticulous attention to detail while developing algorithms, ensuring superior performance and reliability of production processes.
- Adaptability & Learning agility: Capability to thrive in fast-paced and dynamic environment. Eager to learn new technologies and adapt to changing project requirements.
- *Communication:* Strong oral and written communication skills. Clearly and effectively convey technical concepts to all professionals accurately, thus facilitating knowledge sharing.

#### **EXPERIENCE**

### Essennar Transformers, India - Intern

Jun 18 – Jul 18

- Detailed understanding of windings, core building and its arrangement.
- Assembly and testing of transformers.
- Control and Protection of oil-cooled as well as air-cooled transformers.

## PROJECTS & CERTIFICATIONS

- Fault Detection in Supermarket Refrigeration Systems using Machine Learning: Different kind of faults in compressors, sensors, valves etc, are identified by deploying Bayesian algorithms, decision trees, and neural networks.
- Satellite Constellation and Formation Control: A decentralized Control strategy is deployed for the satellites to maintain desired formation in a cluster, simultaneously being in a constellation around the earth for constant coverage over a certain region.
- **Design of PID controller for 2 DoF serial flexible joint:** Proportional constants are determined to move a two-degree joint from one position to another position with less vibration.
- *Learning SCADA Certification:* Introduction to architecture and basic elements of SCADA systems. Understanding of OPC servers for better data navigation between different systems.
- *The Complete PLC Programming Certification:* Understanding of different modules in PLC, and design of basic industrial projects in PLC.

#### **LANGUAGES**

- English Fluent
- Danish Beginner
- Hindi Fluent
- Telugu Native

#### **HOBBIES**

In my spare time, I prefer to spend my time reading novels. Once in a while, I would like to travel to a new place and discover new experiences. Also, I would like to work-out as it helps me to relieve stress.