HANEST ANGEL PRIYADHARSHINI J

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CAREER OBJECTIVE

Embedded Engineer with experience in developing and testing embedded software applications. Hold a Master's in Power System Engineering with strong expertise in Power Systems, Microcontrollers, Embedded systems, and real-time applications. Skilled in problem-solving and delivering reliable engineering solutions with precision and autonomy.

SKILLS SUMMARY

Programming:	C, Embedded C, MATLAB
Microcontrollers:	8051, PIC16F877A, STM32F401RE
Communication Protocols:	SPI, USART, UART, I2C
Design:	AutoCAD, PSpice, EMTP
Development Tools:	MPLAB, Keil, Proteus, STM32CUBE IDE
Soft Skills:	Problem-Solving, Adaptability, Teamwork

EXPERIENCE

➢ **PRICOL** **Feb 2024- Jan 2025**

FIRMWARE ENGINEER:

- Developed a program for 8051, PIC16F877A, and STM32F446RE microcontrollers, ensuring efficient and reliable operation.
- Experience in developing and testing firmware for microcontroller-based systems.
- Skilled in C programming, debugging, and hardware–software integration.
- Knowledge of communication protocols (UART, SPI, I²C) and sensor interfacing.

➢ **LOYOLA INSTITUTE OF TECHNOLOGY, CHENNAI** **March 2020-Jan 2024**

ASSISTANT PROFESSOR

- Worked as an Assistant professor in the Department of Electrical and Electronics Engineering.

➢ **KUMARAN INSTITUTE OF TECHNOLOGY, CHENNAI** **July 2018-March 2019**

ASSISTANT PROFESSOR

- Worked as an Assistant professor in the Department of Electrical and Electronics Engineering.

PROJECTS

Charging and Discharging of Li-Ion Battery — May-2015

This project is to design and program a PIC microcontroller–based system to charge a 12V battery from a solar panel to implement the automatic charging, when battery voltage was low and safe disconnection to prevent overcharging and to Enhance energy efficiency and system reliability through real-time monitoring and optimized firmware control.

Demand Response in Real Time Congestion Management — May-2017

This project is to develop Demand Response (DR) model for real-time congestion management in power systems using a Time-of-Use (TOU) pricing strategy. Implemented the model on an IEEE 30-bus system to optimize load shifting, reduce peak demand, and improve system reliability. Demonstrated that DR programs lower electricity prices and enhance market efficiency by mitigating congestion.

ATC Enhancement Using Facts Device **July-2018**

This project is to enhance the available transfer capability of the system by increasing total transfer capability. The total transfer capability of the system is increased by using facts device and the losses of the system are reduced. The optimal location of facts device is done using particle swarm optimization algorithm.

MINI PROJECT

Automatic LED Controlled Street Light **May-2013**

In this project, a microcontroller-based system was developed to automate LED streetlight operation based on ambient light conditions. A light sensor was used to detect sunlight and automatically switch OFF LEDs during the day and switch them ON at night. This approach improves energy efficiency and reduces manual intervention by implementing an intelligent lighting control mechanism.

CERTIFICATIONS

Diploma in Embedded Systems | Pumo Tech Innovation **Jan 2025-June 2025**

- Learnt embedded systems, microcontroller architecture, and applications in automotive and industrial sectors.
- Understand electronics, embedded C programming, and communication protocols like SPI, I2C, and UART.
- System design, and development tools like Proteus, MPLAB, and Keil, STM32 cube IDE.

Workshop **Jan 2022-June 2024**

- Electric Vehicle Driver Circuit Design Using KiCad Software.
- IPR: Patent, Copyright and Trademark

NPTEL Courses **Jan 2022-June 2023**

- Power Systems Engineering
- Recent Advances in Transmission Insulators
- Digital Protection of Power System

PAPER & JOURNAL PRESENTATION **Jan 2018-June 2024**

- Published Paper on title "**Demand Response in Real Time Congestion Management**" in International Conference on Engineering and Technology and published in Scopus Indexed Journal, International Journal of Engineering and Technology.
- Published Paper in International Conference title "**Allocation of Capacitor in Radial Distribution System Using Marine Predator Algorithm**" in AIP Conference Proceeding, Scopus Indexed.
- Published paper on title "**Reliability Analysis of Radial Distribution Systems with EV Charging Stations in G2V and V2G Modes Using Honey Badger Optimization Algorithm"** in 10th International Conference on Electrical Energy Systems in IEEE Xplore.
- Published Paper on title "**Gesture – Controlled Autonomous Trolley for Seamless Navigation**" in the 2024 International Conference on Power, Energy, Control and Transmission Systems (ICPECTS) held on 08.10.2024 & 09.10.2024.

PATENT PUBLICATION **Jan 2018-June 2024**

- Holds an Indian Patent Publication on "**Urban Infrastructure's Hybrid Renewable Energy Storage and Distribution System**".

EDUCATION

ST. JOSEPH'S COLLEGE OF ENGINEERING **CHENNAI**
M.E – Power Systems Engineering: Percentage: 82.7 **July 2016 - May 2018**

KARUNYA UNIVERSITY **COIMBATORE**
B. Tech – Electrical and Electronic' s Engineering: Percentage: 71.17 **July 2011 - May 2015**

SEVENTH DAY EDEN MATRICULATION HIGHER SECONDARY SCHOOL **VADALUR**
HSC: Percentage: 78.75 **June 2009 - March 2011**

ST. JOSEPH'S MATRICULATION HIGHER SECONDARY SCHOOL **CUDDALORE**
SSLC: Percentage: 70.4 **June 2008 - March 2009**

LANGUAGES

- English
- Tamil

DECLARATION

I hereby declare that all the details mentioned above are in accordance with the truth and fact as per my knowledge and I hold the responsibility for the correctness of the above-mentioned particulars.

Place:

Date: **(HANEST ANGEL PRIYADHARSHINI J)**