



PRADEEP E G

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B.Tech, Electronics and Communication Engineering

Address : NO 5/765A A P K NAGAR DHEERAN MANAGAR

MANIKANDAM TRICHY, APK nagar, Village, Tiruchirappalli, INDIA



Skills

: C, Python, Machine Learning, System Verilog, Embedded Systems, SQL, VLSI

Links

[LinkedIn](#), [GitHub](#), [LeetCode](#)

Education

SRM IST-Trichy

B.Tech · Electronics and Communication Engineering

2026

CGPA - 8.1/10

CHELLAMMAL MATRIC HIGHER SEC.SCHOOL

Class XII - STATE BOARD OF TAMILNADU · BIO-MATHS ·
KUNNATHUR,VIRALIMALAI,PUDUKOTTAI DT-621316

2022

Percentage - 78.83%

CHELLAMMAL MATRIC HIGHER SECONDARY SCHOOL

Class X - STATE BOARD OF TAMIL NADU ·
KUNNATHUR,VIRALIMALAI,PUDUKOTTAI DT-621316

May 2019 - May 2020

Percentage - 98.6%

Projects

LOW POWER TRANSMISSION USING LORA TECHNOLOGY

· Arduino IDE

Jan 2025 - Jan 2025

Wireless Communication

·Low Power Communication System: Implemented long-range, low-power wireless communication using the LoRa SX1276 module interfaced with the STM32F103C6T6 microcontroller for efficient sensor data transmission.

·Robust Connectivity Testing: Evaluated communication performance across varying distances achieving stable data transfer up to several kilometres and demonstrating suitability for remote monitoring applications.

32-BIT ARITHMETIC LOGIC

· Model Sim, Intel Quartus Prime

May 2024 - May 2024

Verilog

·Designed a digital ALU using Verilog that performs multiple arithmetic and logical operations on binary numbers (8-bit,16-bit, or 32-bit), including the generation of status flags like Zero, Carry, Overflow, and Sign-flags.

·Simulated and tested the ALU using tools like ModelSim and then synthesized it for FPGA implementation using Intel Quartus Prime.

UART COMMUNICATION PROTOCOL

· Model Sim, Intel Quartus Prime

Jun 2025 - Jun 2025

Wireless Communication

·Design a complete UART Communication Protocol using System Verilog that supports configurable baud rate, parity, and stop bits, implementing TX and RX modules with FSMs and shift registers.

·Simulated and verified the UART System using ModelSim, created testbenches, then synthesized the design using Intel Quartus Prime.

PREDICT CALORIE EXPENDITURE

· Matlab

Jun 2025 - Jun 2025

Machine Learning

·Developed a machine learning-based calorie prediction system that analyses physiological and activity data to predict energy expenditure using regression algorithms, achieving high accuracy on real-world health datasets.

·Trained, evaluated, and deployed models using Python libraries like Pandas, Scikit-learn, and Matplotlib, and performed data preprocessing, model tuning, and performance evaluation using metrics like R^2 score, MAE, and RMSLE to optimise health prediction outcomes.

Certifications

Databases and SQL for Data Science with Python IBM	Mar 2025
Python for Data Science, AI & Development IBM	Mar 2025
System Design Through Verilog NPTEL · NPTEL24EE94S448301146	Jul 2024

Conferences and Workshops

LINUX AND GIT FUNDAMENTALS CURRENTS 2025,NIT TRICHY · National Institute of Technology, Tanjore Main Road, National Highway 67, Tiruchirappalli, Tamil Nadu - 620015	Mar 2025
SOC DESIGN FOR LOW POWER APPLICATION PROBE,NIT TRICHY · National Institute of Technology, Tanjore Main Road, National Highway 67, Tiruchirappalli, Tamil Nadu - 620015	Feb 2024
PID CONTROLLERS USING MATLAB SIMULINK CURRENTS 2025 · National Institute of Technology, Tanjore Main Road, National Highway 67, Tiruchirappalli, Tamil Nadu - 620015	Mar 2025
MATLAB AND SIMULINK PROBE,NIT TRICHY · National Institute of Technology, Tanjore Main Road, National Highway 67, Tiruchirappalli, Tamil Nadu - 620015	Feb 2024

Volunteering

IDE-Bootcamp Volunteer	Sept 2024 - Sept 2024
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Volunteering at the IDE BootCamp is an exciting opportunity to help create a supportive and inspiring environment for participants. As a volunteer, my role involves assisting with organizing activities, managing schedules, and ensuring everything runs smoothly during the event. I will help participants by answering their questions, guiding them through tasks, and providing any support they need to make the most of the boot camp.

Languages

Tamil [Native Proficiency], English [Professional Working Proficiency]