PRADEEP EG

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SKILLS

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

EDUCATION

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY Tiruchirappalli

Bachelor of Technology in Electronics and Communication Engineering - CGPA: 8.2 2022–Present

CHELLAMMAL MATRIC.HIGHER SEC.SHOOL Tiruchirappalli

12TH :78.8 Percentage 2021–2022

10TH :98.6 Percentage 2019–2020

PROJECTS

LOW POWER TRANSMISSION USING LORA TECHNOLOGY JAN-2025

- 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 MAY-2024

- 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 JUN-2025

- 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 JUN-2025

- 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.

EXTRACURRICULAR ACTIVITIES

IIIT SRI CITY HACKATHON (POWERED BY PLANOTECH GROUP OF COMPANIES) DEC-2023

CURRENTS '24 EVENTS (PRESENTED BY MICRON) MAR-2024

Held at the National Institute Of Technology, Tiruchirappalli

PROBE'24 WORKSHOPS(PRESENTED BY QUALCOMM AND INNOVIANS TECHNOLOGIES) FEB-2024

Held at the National Institute of Technology, Tiruchirappalli

INDUSTRIAL TRAINING AT BSNL DEC-2023

Held at Tiruchirappalli

MSME IDEA HACATHON 4.0 OCT-2024

LEADERSHIP & ACTIVITIES

VOLUNTEER AT IDE BOOTCAMP PROGRAM SEP-2024

Held at SRM Institute of Science and Technology, Tiruchirappalli

CERTIFICATIONS

India Semiconductor Workforce Development Program – Level 1 (Link)
Samsung Semiconductor India Research (SSIR), IISc, Synopsys Mar 2025
Completed training on Semiconductor Device Technology, TCAD, and 2D Device Simulation & Analysis. Covered device modelling**,** technology CAD workflows, and fabrication-level simulation. Scored 82% in national-level evaluation.

System Design Through Verilog – NPTEL Online Certification(Link)
Indian Institute of Technology Guwahati Sep 2024
Completed an 8-week certification program focused on Digital System Design using Verilog HDL. Achieved a consolidated score of 55% (Online Assignments: 24.5/25, Proctored Exam: 30/75). Certification awarded by NPTEL and IIT Guwahati under the Ministry of Education, Government of India. Roll No: NPTE24EE94S448301146.

Python for Data Science, AI & Development – IBM Certificate(Link)
Coursera (Authorized by IBM) Feb 2025
Completed hands-on training in Python programming, data science, artificial intelligence, and application development. Developed practical skills in Python coding, data analysis, and AI workflows.
Verified certificate issued by IBM via Coursera.

Databases and SQL for Data Science with Python – IBM Certificate(Link)
Coursera (Authorized by IBM) Feb 2025
Successfully completed a comprehensive course covering SQL databases, data science, and Python integration. Learned to design, query, and manage databases using SQL for data-driven applications.
Verified certificate issued by IBM via Coursera.