

SAHIL K K

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Education

Vellore Institute of Technology

2024 – 2028(Expected)

Bachelor of Technology in Electronics Engineering (VLSI Design and Technology)

Tamil Nadu

PPMHSS Kottukkara

2021 – 2023

Higher Secondary, PCMB

Kerala

Relevant Coursework

- VLSI
- Computer Architecture
- Control Systems
- Signal Processing
- Machine Learning
- Circuit Design
- Digital Design
- Device Modelling

Experience

Indian Institute of Information Technology, Kottayam

May 2025 – July 2025

AI FPGA Intern

- Implemented a 7–8–2 MLP on FPGA using Verilog for skin-pixel classification, with fixed, pre-trained weights.
- Designed and tested dot product, activation, and layer modules, and verified the pipeline using pixel-level testbenches.

First Class

May 2024 – July 2024

Physics Tutor

- Conducted one-on-one tutoring sessions, simplifying complex topics for high school students.
- Specialized in teaching Mechanics and Thermodynamics, improving conceptual clarity and problem-solving skills.

Leadership & Technical Activities

IEEE Electron Device Society SBC, VIT Chennai

Aug 2025 – Present

Secretary

- Coordinated technical activities and project works for 60+ students across multiple departments.
- Led and reviewed student projects in FPGA and PCB design, handling design reviews and technical guidance.

ICSD VIT Chennai

Feb 2025 – Present

Research Lead

- Lead a team of 25+ on writing research papers on trending topics in semiconductor domain.

Career Club

July 2021 – Mar 2023

President

- Led a team of 50 members in the Career Club, organizing tech events, sessions, and competitions.
- Formed and guided a team to develop an app for the school, overseeing its design and development.

Projects

EEG-Based Biometric Authentication

- Analyzed EEG signals to study subject-specific patterns for biometric authentication.
- Performed signal processing and feature extraction to evaluate authentication feasibility.

Plantation Management System

- Developed an IoT-based smart plantation system for crops with remote monitoring and control via Blynk app.
- Integrated soil moisture, temperature, humidity, and light sensors for real-time monitoring.

8-Bit ALU

- Designed and implemented an 8-bit ALU in Verilog supporting arithmetic, logic, shift, and comparison operations.
- Simulated using ModelSim and synthesized using Quartus II.

Training & Certificates

Electronics Foundations: Semiconductor Devices: LinkedIn

VLSI SoC Design: Maven Silicon

VLSI for Beginners : NIELT

Technical Skills

VLSI & Digital Design: Verilog, VHDL, RTL Design, FSM, FPGA Implementation (Xilinx, Vivado, ModelSim)

Analog Electronics: Circuit Analysis, SPICE Simulation (LTSpice)

EDA Tools: ModelSim

Programming, Software & Tools: Python, C, C++, Perl, TCL, MATLAB, Git/GitHub, Linux