SUNIL KUMAR SANALA

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CAREER SUMMARY

As a passionate Electronics and Communication Engineering (ECE) student with a strong focus on the VLSI domain, I have developed expertise in digital design, HDL coding, and simulation using industry-standard tools like Xilinx Vivado. My academic background includes specialized coursework in digital VLSI, where I have honed my skills in designing and verifying digital circuits . My technical proficiency, coupled with a keen interest in advancing my knowledge in digital VLSI engineering, positions me to contribute effectively to complex VLSI design and development projects.

EDUCATION AND CERTIFICATION

BTech |Electronics and Communication | Rajiv Gandhi University Of Knowledge Technologies 2026
PUC | Rajiv Gandhi University Of Knowledge Technologies Ongole -9.1% 2022
10th class| ZPHS Nandipadu | Nandipadu, Andhrapradesh 2020

TECHNICAL SKILLS

Digital design | Circuit Design | Digital System Design |C Program| Verilog HDL | Xilinx | Vivado | EDA Tools 3

PERSONAL PROJECTS

Universal Asynchronous Receiver and Transmitter

- Developed a UART module in Verilog, including baud rate generation, transmitter, and receiver.
- Implemented serial communication protocols with start/stop bits, parity checking, and synchronization.
- Designed a state machine for control logic, ensuring efficient data transmission and reception.
- Verified functionality using testbenches and simulated the design for FPGA implementation.

Car Wash Controller

- **Designed and implemented a Car Wash Controller** using System Verilog, incorporating state machines for automated washing sequences.
- **Developed water recycling and chemical application systems**, optimizing resource efficiency and ensuring eco-friendly operations.
- **Implemented and tested a conveyor belt control mechanism**, ensuring synchronized washing, rinsing, and drying stages.
- **Created and verified a SystemVerilog testbench**, simulating real-world scenarios to validate system performance and reliability.

PROFESSIONAL DEVELOPMENT

NPTEL System Design Through Verilog | 87 % 2024
NPTEL Digital Circuits | 57 % 2024
UDEMY System Verilog Essentials 2025
INFOSYS VLSI Digital Design-verilog programming 2025