

# Thalacheeru Mohith Chowdary

Email: [mohithchowdary6929@gmail.com](mailto:mohithchowdary6929@gmail.com)

LinkedIn: [Mohith-Chowdary](https://www.linkedin.com/in/Mohith-Chowdary)

Github: [github.com/mohith6929](https://github.com/mohith6929)

## Education

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### Indian Institute of Technology Bhubaneswar

B. Tech in Electronics and Communication Engineering

CGPA: 8.36

Aug. 2023 - present

### Sasi Educational Institute, Velivenu

Senior School Certificate Examination, CBSE

Percentage: 92.8%

June 2021 - May 2023

## Projects

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### RTL Design of RV32I RISC-V Processor | Verilog, Vivado, FPGA

- Designed single-cycle, multi-cycle and 5-stage pipelined RV32I processor in Verilog.
- Implemented hazard detection and forwarding unit to resolve pipeline hazards.
- Verified functionality of instructions (ADD, ADDI, LW, SW, JAL, JALR, BEQ) using simulation and FPGA testing.
- Synthesized and deployed on Basys3 FPGA using the Vivado toolchain.

### bfloat-16 Floating-point Adder/Subtractor | Verilog, Vivado

- Designed a hardware unit supporting bfloat-16 floating-point addition and subtraction.
- Implemented exponent alignment, mantissa normalization and rounding logic.
- Verified functionality using VHDL testbench simulation and FPGA deployment on Basys3.

### Arduino-Based Gas detection

- Designed an Arduino-based gas monitoring system using the MQ-5 gas sensor for LPG/CH4 level detection.
- Used ESP8266 module to integrate Blynk IoT platform for real-time mobile monitoring and alert notifications.
- Implemented threshold-based buzzer alarms and cloud-based logging to demonstrate embedded system and IoT

## Key Skills

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- **Programming:** C, C++, Python, Verilog
- **Tools:** Vivado, Cadence Virtuoso, MATLAB, LTspice, Git, VS Code, Linux-Ubuntu
- **Hardware/Concepts:** FPGA Design, Digital Design, UART, 8085,8051 & RISC-V Architectures

## Position of Responsibility

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### Assistant Co-ordinator at Counselling Service Team

(April 2025 - present)

- Organizing and planning events by the Counseling Service Team.
- Assisted Student Guides in mentoring the freshers at IIT Bhubaneswar.

### Student Guide at Counselling Service Team

(April 2024 - April 2025)

- Guided Freshers at IIT Bhubaneswar throughout the year with their academic and non-academic issues.
- Organised several events as a part of Counselling Service Team boosting mental health in campus.

### Associate at Wissenaire

(Oct. 2023 - March 2024)

- Approached and managed the coupon partners and food partners for the techno management fest of IIT Bhubaneswar.

## Scholastic Achievements

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- Secured ALL INDIA RANK 4603 in JEE-ADVANCE out of 0.18 million candidates.
- Secured ALL INDIA RANK 6779 in JEE-MAIN B. Tech out of 1.2 million candidates.
- Secured ALL INDIA RANK 2284 in JEE-MAIN B. Planning.