

# Ankit Raj

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## Education

### Indian Institute of Space Science and Technology

Expected July 2026

B.Tech in Electronics and Communication Engineering (CGPA: 9.24)

Thiruvananthapuram, Kerala

- **Relevant Coursework:** Data Structures and Algorithms (C++), Analog & Digital Electronics, Electromagnetic Waves, Network Analysis, Signals and Systems, Control Systems, Engineering Mathematics

## Experience

### Summer Internship - LASP, USA

May 2024 - July 2024

INSPIRESat-3 Satellite Communication Engineer

- Designed Link Budget for S band and X band Communication System

### Telecommunication Mission Design

October 2023 - January 2024

SSPACE Induction 2022 Batch

- Designed link budget for satellite communication

### JeevYantra - Robotics Club, IIST

October 2024 - Current

Vice President

- Worked on many electronics projects like Line Follower bot, Object Avoidance bot, WiFi Controlled bot.
- Has taken 3 to 4 school workshops on Robotics.
- Has won Arduino Hackathon organised by JeevYantra.

### Conscientia 2k24 - Website Head

March 2024 - October 2024

Developed complete frontend and backend of website from scratch

- NextJs for frontend
- NodeJs with Express for backend
- Flask as a secondary backend for scripting related services
- DigitalOcean for complete deployment and production
- MongoDB as a Database
- Developed Backend for App

## Projects

### Voltage regulator circuit | Analog Electronics final project

- Built the circuit of regulating a particular output voltage.
- Used components like OpAmps, Zenner diode, etc.
- Output can be adjusted according to user needs, then it will not change irrespective of input voltage or load.

### Arduino based projects | Line follower bot, Object avoidance bot, WiFi controlled bot

- Built complete bots from scratch including its electronics and programming.
- Familiar with commonly used sensors like IR, Ultrasonic, Temperature and other components like DC Motors, LCD display, etc.
- Done programming in Arduino using Embedded C language

### Conscientia Website | Javascript, NextJs, ReactJS, NodeJS, HTML, CSS, MongoDB

- Worked on a complete MERN stack website.
- Worked on NextJs, Mongoose, MongoDB, NodeJs

### Online quiz website | Javascript, NextJs, NodeJS, HTML, CSS, MongoDB, WebSocket

- Developed a personal project of Online realtime quiz system.

## Technical Skills

**Programming Languages:** C++, Python, Javascript

**Technologies:** MATLAB, LtSpice, Arduino Programming, NodeMCU Programming, Simulink, Verilog, React.js, Express.js, Bootstrap, Node.js

**Concepts:** Analog Filters, Analog Amplifiers, Digital Circuit Designing, FPGA Programing, OpAmp Circuits, Satellite Communication, Website development frontend & backend