

Bommu Rahul Krishna

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EDUCATION

Vellore Institute of Technology, Chennai, India

B.Tech in Electronics and Communication Engineering

Sep 2022–July 2026

7.93 CGPA (June 2025)

EXPERIENCE

Student Intern | [Link](#)

June 2024 – July 2024

Bharat Sanchar Nigam Limited (BSNL)

- Gained hands-on experience in various aspects of telecom and electronics, including cellular concepts frequency planning, mobile communications (GSM, 4G, 5G), network optimization VSWR measurements, DSL technologies broadband, optical fiber communication networks, and switching technologies NGN exchange.
- Performed network optimization and VSWR measurements to improve signal efficiency and reduce losses in telecom networks.

Student Intern | [Link](#)

May 2024 – July 2024

Maven Silicon

- focused on embedded systems by implementing a Home Automation project, gaining practical experience in industry-relevant skills and technologies.
- Achieved 95% hardware reliability: Designed and assembled ESP8266 PCB; validated connections for 8 sensors/actuators.98% SLA compliance: Auto/manual controls responded within 1 min across 20+ trials.92% environmental stability: Operated reliably from 0°C to 60°C.

PROJECTS

Smart Passport Authentication Solution | 8051 Microcontroller, RFID Tech | [Source](#)

Jan 2024–Feb 2024

- Improved accuracy by 98%, reduced unauthorized access by 85%, and sped up ID read/write by 40%.
- Reduced PCB cost by 25%, decreased power use by 30% through hardware sleep modes.

Manhole Detection System | Arduino, GSM, GPS | [Source](#)

Feb 2025–Apr 2025

- Developed a system with 90% detection accuracy for hazardous manhole conditions.
- Reduced manual checks by 60% using GSM/GPS + real-time alerts with Embedded C.

Hybrid Fiber-FSO System | OptiSystem, CML/DML/EML | [Source](#)

Feb 2025–Apr 2025

- Maintained Q-factor 10 and 88% reliability across varying weather conditions.
- Reduced BER by 65% using Chirp Managed Laser modulation.

ACHIEVEMENTS

- Secured “Top Coder” recognition, placing in the top 5% of 8,000+ participants in VIT’s multi-phase competitive programming challenge, demonstrating exceptional problem-solving and algorithmic expertise | [Source](#)

TECHNICAL SKILLS

Languages: Java, Python, C/C++, Verilog HDL, R

Electronic Circuit Simulation and Design Tools: LTspice, ModelSim HDL Simulator, Cadence Virtuoso, TinkerCad, Intel Quartus Prime, OptiSystem, Simulink, Ansys HFSS, NetSim

Developer Tools: Git, GitHub, VS Code, PyCharm, IntelliJ

LICENSES AND CERTIFICATIONS

- Packet Tracer & IoT – Cisco — [Certificate](#)
- Arduino UNO Bootcamp – Udemy — [Certificate](#)
- Obstacle Avoiding Car – Udemy — [Certificate](#)
- AWS Cloud Practitioner – AWS — [Certificate](#)
- Oracle Cloud Infrastructure 2025 Certified DevOps Professional — [Certificate](#)
- Oracle Oracle Analytics Cloud 2025 Certified Professional — [Certificate](#)

POSITIONS OF RESPONSIBILITY

- **Coordinator**, Telugu Literary Association Club

Nov 2023 – May 2024