

Prabal Pratap Singh Rawat

Gwalior, India | +91 9475317125 | prabalpsrawat@gmail.com | linkedin.com/in/ppsr | github.com/Prabal1902

Education

Rustamji Institute of Technology, BSF Academy Tekanpur

B. Tech in Electronics and Communication Engineering

September 2022 – Present

CGPA: 7.75 /10

Experience

Biophar Lifesciences Pvt. Ltd.

Consultant Intern.

October 2025 – April 2026

Chandigarh, India

- Generated data-driven insights to support management decision-making and strategic planning.
- Aided in preparing and maintaining regulatory compliance documentation in adherence to ISO 9001:2015, DCGI, GMP, and WHO certification requirements..

Origin Antares Incorp.

Satellite & Embedded Systems Engineer (Team Member)

October 2025 – Present

Remote

- Worked on CubeSat design, testing, and simulation for embedded hardware systems.
- Developed, tested, and debugged embedded firmware for satellite applications.
- Assisted in designing low power embedded circuits for space grade systems.
- Contributed to sensor integration, communication protocols, and telemetry systems.
- Performed microcontroller and FPGA-based system prototyping.

Bhilai Steel Plant, Steel Authority of India (SAIL)

Project Intern – Telecommunication Department.

September 2025 – October 2025

Bhilai, India

- Designed and prototyped ESP32-based LoRa communication terminals for intra-plant communication use cases.
- Implemented SPI-based communication between MCU and LoRa transceiver module.
- Designed custom through-hole PCB using KiCad and performed hand assembly and solder validation.
- Developed enclosure prototypes using CAD and 3D printing for rugged deployment scenarios.

Denso Haryana Pvt. Ltd.

Summer Trainee

April 2025

Gurugram, India

- Studied electronics production workflows including SMD assembly, reflow processes, and solder quality control.
- Analyzed manufacturing optimization using 5M+1E methodology.

Projects

ESP 32 based Lo Ra Text Terminals | CAD/3D printing/embedded systems.

October 2025

- Developed embedded firmware in C++ for wireless text communication system.
- Designed and fabricated custom PCB and enclosure for standalone operation.
- Demonstrated proof-of-concept for decentralized communication in industrial settings.

UAV systems and components | Betaflight, C/C++, Onshape, Ansys

August 2025

- Designed micro-UAV structural components using CAD and validated mechanical integrity via FEA simulations.
- Developed custom mounting interfaces and lightweight landing gear using design-for-additive-manufacturing principles.

3D structure realization of Diode | Sentaurus TCAD

April 2025

- Created 3D semiconductor diode model using Sentaurus SProcess and SDevice.
- Simulated doping profiles and temperature-dependent IV characteristics.
- Analyzed device behavior across varying thermal conditions.

Data extraction application | Python

June 2023

- Built Python-based OCR application for extracting structured data from PDFs into CSV/Excel using Pandas and Tabula.

Technical Skills

Languages C, C++, Python, SQL, rust, VHDL.

Tools MATLAB, Cadence (Virtuoso), LT-Spice Arduino, Onshape/Fusion360, Bambu Labs studio, Ansys, KiCAD, CopellaVsim, jupyter, miniconda, linux.

Leadership & Extracurricular

IITD-RJIT Innovation Club

President – Project and team lead for Innovation club

July 2025- Present

RJIT, BSF Acy., Tekanpur

Achievements & Certifications

- Received 1,500 INR for winning second place in Exhibition on Innovative Products and Designs Exhibition on Innovative Products and Designs Issued by Regional Science Center Bhopal , Ministry of Culture, Govt. of India.
- Received 5,000 INR and 2nd position in Ideate with IBM Ideathon.
- ISWDP Samsung Student Fellowship recipient.