

Jasmine Kaur

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EDUCATION

Dr B.R. Ambedkar National Institute of Technology, Jalandhar

2022–Present

B.Tech — Electronics and Communication Engineering

CGPA: 8.08/10 (till 6th Sem) — **GATE Qualified**

EXPERIENCE

Bharat Electronics Limited (BEL), Panchkula

June 2025 – July 2025

Intern — On-Site

Worked across SMT manufacturing, Jammers Division, and HUD avionics. Observed PCB workflow: Solder Jet Printing, Pick-and-Place, Reflow, AOI. Studied GSM/CDMA jammers (Classroom/Prison), N40/N78 modules, antenna placement. Analysed CAT-RIU communication systems and RF interference testing.

PROJECTS

- **Autonomous Mobile Robot for Agriculture — AWaDH IIT Ropar DST 2025**
Patent + research publication in progress. ML + CV based capsicum farming robot: maturity detection (red/yellow/green), flower localisation + vibration pollination, robotic fruit plucking via CV/ML, leaf disease detection via ML.
 - **Lab Assistant Robot (In Progress)**
LiDAR + ROS robot for autonomous navigation and path planning.
 - **Curvetopia**
CNN-based curve regularisation, symmetry detection, and missing-part completion; 98% accuracy in 20 epochs.
 - **ASL Converter**
Real-time ASL to text translation using Python, OpenCV, Random Forest.
 - **Line Following Bot**
Arduino + IR sensors + servo motors; autonomous line tracking.
 - **Speed Measuring Device**
Arduino + HC-SR04 ultrasonic sensor + LED display for object speed measurement.
 - **Temperature/Humidity Device**
ESP32 + DHT11 for Bluetooth-based real-time telemetry.
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TECHNICAL SKILLS

Languages: C, Python, Assembly (8085/8086/8051), DSA

ML/CV: PyTorch, Scikit-learn, OpenCV, Pandas, MLOps

Tools: MATLAB, VS Code, Arduino IDE

Core Courses: Digital Electronics, Analog ICs, Communication Systems, Antennas, DSP, EMFT, VLSI, Microprocessors, Coding Theory, Control Systems, Digital System Design, Advanced Mobile Communication, Neural Networks and Fuzzy Logic

POSITIONS OF RESPONSIBILITY

RTist — Technical Lead

Organised robotics competitions and technical activities.

E2ACon — Coordinator

Managed international-level technical conference operations.

ACHIEVEMENTS

- Represented RTist NITJ — IIT Bombay Techfest (Line Following Robo).
- Top 50 — Adobe GenSolve Hackathon.