

# Gurkirat Singh

## Electronics Engineer

Kharar, Punjab

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## SKILLS

**Professional Skills:** Embedded Programming, FreeRTOS, IoT and Hardware Protocols, PLC, Digital Electronics, Linux Operating System, Node.js, AWS Cloud, Linux Programming using C

**Software Skills:** PulseView, VSCode, Autocad, Linux Terminal, Siemen Manager, Wiresharks, Arduino IDE, KiCad, Buildroot

**Soft Skills:** Problem-Solving, Troubleshooting, Leadership, Critical Thinking, Teamwork, Creativity

## EXPERIENCE

### Airport Authority of India, Chandigarh - *CNS Intern*

Jul 2023 - Aug 2023 · 2 mos

- Inspecting and maintaining CNS Equipments

## EDUCATION

### Indo Swiss Training Centre, Chandigarh - *Diploma in Electronic*

Sep 2021 - Aug 2024

Percentage: 81.12 (Gold Medalist)

### A.P.J Public School - *Matriculation*

2020-2021

Percentage: 88

## PROJECTS

### IoT enabled Collaborative KitchenIoT enabled Collaborative Kitchen

Feb 2024 - Jun 2024

- Designed and implemented an integrated system for restaurant kitchen management, including smart kiosks, dispensers, inventory management, and scheduling tools.
- Technologies used: Microcontrollers, MQTT, Node.js, Nextjs, MongoDB, AWS EC2, Linux systems, Embedded Sensors

### Terminal AI for LLM Control of Computers

- Created an innovative terminal-based AI assistant that allows language models like GPT and Gemini to interact with and control computer systems.
- Technologies used: Python, Natural Language Processing, API integration, Bash scripting

### IoT Enabled Home Automation with TS-based Frontend and Security System

- Developed a comprehensive smart home solution integrating IoT devices with a TypeScript-based frontend and advanced security features.
- Technologies used: IoT protocols, TypeScript, Node.js, ESP32, MQTT, Hardware Protocols, Linux, Nextjs, C Programming

### IoT-enabled Drink Dispenser Machine

- Engineered an automated drink dispenser with remote monitoring and control capabilities as part college project.
- Technologies used: Linux, MQTT, Node-RED, sensors, ESP32, Nodejs, C

## AWARDS

- **Gold Medalist** at Indo Swiss Training Centre
- 1st Ranked in State-Level Mechatronics Skill India Competition

## VOLUNTEER WORK

### ISTC IoT Club - Coordinator

Sep 2023 - Jun 2024 · 10 mos

Coordinated IoT workshop as part of CSIR Skill initiative and Robotics Workshop. As the coordinator of the IoT Club at Indo Swiss Training Centre, I was responsible for leading teams of students in the development of innovative projects and ideas focused on raising awareness about IoT and its application

### ISTC - Student Placement Coordinator

Sep 2023 - Jul 2024 · 11 mos

## EXTRACURRICULAR ACTIVITIES

- Coordinated IoT Workshop as part of CSIR Skill initiative
- Organiser of Robotics Workshop

## HOBBIES

- Inquisitive lifelong learner
  - Soundtrack enthusiast
  - Traveler
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