

# Mahadeep Singh

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## Education

### Government Polytechnic Uttarkashi

July 2022

*Diploma in Electronics Engineering (CGPA: 7.1/10.0)*

*Uttarkashi, Uttarakhand*

- **Relevant Coursework:** Microprocessor, PLC(Programmable Logic Controller) and Embedded System, Digital Electronics, Introduction to C. optical fiber, analog electronics.

## Experience

### SLOG SOLUTION PVT. LTD.

OCT 2023 – Current

*TRAINEE*

*Dehradun, Uttarakhand*

- Developed and implemented IoT solutions for various projects during training at Slog Solution Private Ltd.
- Contributed to the design and development of a Line Follower Robot, integrating sensors and actuators for precise navigation.
- Gained hands-on experience in programming microcontrollers and PLCs to automate processes and enhance efficiency.

### Bajaj Auto Ltd

July 2022 – July 2023

*Electronic Engineer*

*Pantnagar, Uttarakhand*

- Utilized PLC programming skills to automate production tasks and enhance productivity while adhering to safety protocols and industry regulations.
- Implemented preventive maintenance schedules for electronic equipment and machinery to prevent breakdowns and minimize disruptions to production schedules.
- Analyzed data from production line sensors and monitoring systems to identify trends, optimize performance, and reduce waste.

## Projects

### IoT-Based Line Following Robot with IR Sensors | Arduino , IR sensors , DC motors , Motor driver , Circuit components

- Developed a Line Following Robot using IoT technology, Arduino microcontroller, IR sensors, DC motors, and a motor driver.
- Utilized Arduino microcontroller to process sensor data and control the movement of DC motors through the motor driver.
- Integrated IR sensors for line detection, enabling the robot to autonomously follow predefined paths or lines on the ground. .

### PLC-Based Traffic Light Control System | PLC ,PLC Programming Software, Wiring Components, Power Supply Unit

- Designed and implemented a traffic light control system using Programmable Logic Controller (PLC) technology. Developed the logic for controlling the sequence of traffic lights based on predefined timing parameters and traffic flow requirements.
- Utilized PLC programming software to create ladder logic diagrams to control the operation of the traffic lights. Documented the project including PLC program code, wiring diagrams, and operational procedures for future reference and maintenance.

### Temperature and Humidity Monitoring System | Nodemcu (esp8266), DTH11, arduinoIDE, Power supply,

- Programmed the NodeMCU board using Arduino IDE or other compatible programming environments to read sensor data. Established Wi-Fi connectivity to enable remote monitoring and data transmission to a cloud platform or local server. .
- Designed a user-friendly interface for accessing real-time temperature and humidity data via a web browser. Presented the project to demonstrate its applications in home automation, environmental monitoring, and IoT (Internet of Things) projects.

## Technical Skills

**Languages:** Rust, Kotlin, Swift, Go, Scala, TypeScript, R, Perl, Haskell, Groovy, Julia, Dart

**Technologies:** React.js, Angular, Vue.js, Django, Flask, Ruby on Rails, Spring Boot, Express.js, TensorFlow, PyTorch, jQuery, Bootstrap, Laravel, Flask, ASP.NET, Node.js, Electron, Android SDK, iOS SDK, Symfony

**Concepts:** Compiler, Operating System, Virtual Memory, Cache Memory, Encryption, Decryption, Artificial Intelligence, Machine Learning, Neural Networks, API, Database Normalization, Agile Methodology, Cloud Computing