Temperature Controlled Electric Heater

Abstract:

- The "Temperature Controlled Electric Heater" project aims to design and implement a heating system that automatically regulates temperature based on user-defined settings.
- This project integrates a microcontroller with temperature sensors and a heating element to achieve precise control over the environment's temperature. The primary objectives are to enhance user comfort and energy efficiency by maintaining a consistent temperature level within a specified range.
- The system utilizes a microcontroller such as Arduino to monitor the ambient temperature using one or more sensors.
- The microcontroller processes this data and activates/deactivates the heating element accordingly to achieve and maintain the desired temperature setpoint.
- A user interface, possibly integrated via a display and buttons, allows users to adjust the target temperature and view system status.