

SMART CHARGER

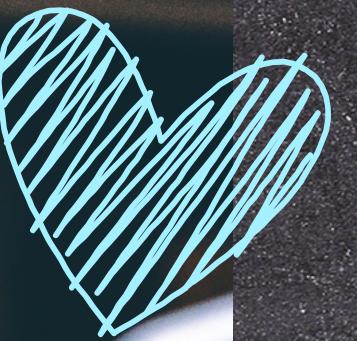
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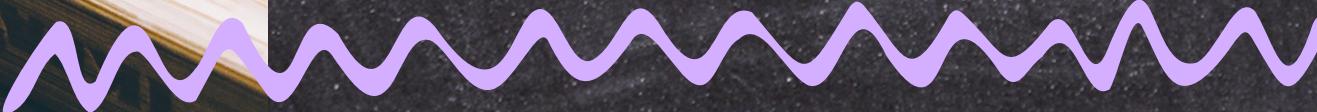
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Introduction



Smart chargers revolutionize the charging experience by employing advanced algorithms and safety features to optimize charging efficiency, preserve battery health, and enhance user convenience. With dynamic adjustments, comprehensive protection mechanisms, and smart connectivity options, these chargers offer a reliable and intelligent solution for powering various electronic devices while prioritizing safety and energy efficiency.





Project overview //

RASPBERRY PI CO W: Utilizing the ESP32 for processing capabilities.

RELAY: Controlling the power flow to the charging device.

REAL-TIME CLOCK (RTC): Keeping track of charging times.

PUSH BUTTON: Enabling user input for adjusting charging duration.



Objectives

1

BATTERY HEALTH

- Preserving long-term battery health and lifespan of battery by using optimized charging algorithms

2

SAFETY

- Ensuring safe charging by monitoring parameters like temperature, voltage, and current to prevent overcharging, overheating, or short circuits.

3

ENERGY MANAGEMENT

- Supporting features like scheduling charging times or integrating with smart home systems for efficient energy management.

Process

Conclusion

THANK
YOU