

# **Electric Vehicles Wireless Charging Station**

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**Abstract:** *Electric vehicles (EVs) are becoming increasingly popular due to their environmental benefits and reduced dependence on fossil fuels. However, conventional wired charging systems require physical connectors, which can cause inconvenience and maintenance issues. Wireless charging technology provides a convenient and safe method for charging EVs without physical contact. This paper presents the design and analysis of a wireless charging station for electric vehicles using inductive power transfer. The system consists of a transmitter coil, receiver coil, power supply unit, and rectifier circuit. Power is transferred through electromagnetic induction between the coils. The proposed system improves user convenience, reduces wear and tear of charging connectors, and enhances safety.*

**Keywords:** Electric Vehicles, Wireless Charging, Inductive Power Transfer, Charging Station, Electromagnetic Induction

