FORECASTING OF FOREST FIRES THROUGH MACHINE LEARNING MODEL

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Abstract *The focus of this research is on identifying potential areas of forest fires, which have become a significant issue worldwide, especially during the summer season. By using local sensor data in real-time, meteorological information such as ambient temperature, humidity, and wind speed can be obtained. These crucial parameters are used to calculate the forest fire weather index (FWI) and predict the probability of fire occurrence. This technique utilizes historical datasets and machine learning algorithms to develop models. An embedded system is designed, which includes different sensors and Wi-Fi mesh connectivity to transmit information. this research work focuses on the development of a system that uses real-time sensor data and machine learning algorithms to identify potential areas of forest fires and predict their occurrence, providing valuable insights that can aid in their prevention. The embedded system designed for this purpose allows for the collection and transmission of data in real-time, making it an important tool for early detection and rapid response to forest fires.*

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