# Abstract

The difficulty of choosing the ideal attire based on one's preferences and the weather conditions is a common worry in today's fast-paced world. In response, WEAR (WEather Attire Recommender) presents a creative solution in the form of an intelligent outfit suggestion system that aims to streamline and improve the wardrobe picking process. WEAR is a novel combination of technology and personal fashion intelligence that makes use of machine learning algorithms, calendar scheduling, user preferences, and weather forecasts. This project elaborates on the WEAR software implementations, system design, hardware requirements, and restrictions. By taking these factors into account, WEAR is presented as a user-focused solution ready to simplify the outfit selection process and offer a more practical and customized approach to everyday clothing decisions.

In this project, we created a sophisticated system that combines a set of technological elements to provide outfit recommendations using up-to-date data and user inputs. We employed machine learning algorithms, such as K-Nearest Neighbors (KNN), Support Vector Machine (SVM), and Naive Bayes, to examine weather conditions and user preferences in order to provide precise recommendations for outfits. The system utilizes the OpenWeatherMap API to retrieve real-time weather information and the FullCalendar API to handle user events. In addition, a DHT22 sensor offers instantaneous temperature and humidity measurements, guaranteeing the system's operation even in the absence of internet connectivity. The Python-based backend manages data preprocessing, model training, and API interactions, while the frontend, created using HTML, CSS, and JavaScript, provides a user-friendly interface for managing clothes inventories and scheduling events. The incorporation of a text-to-speech functionality improves accessibility, particularly for individuals with visual impairments. The Naive Bayes model achieved an accuracy score of 65%, the SVM model achieved 82%, and the KNN model achieved 77.5%. These results demonstrate the system's ability in giving personalized and practical outfit recommendations. By implementing these advancements, WEAR effectively diminishes the duration and exertion necessary for daily clothing choices, rendering it a helpful tool for modern life.



