

Data Model to Predict Customize Skin Care Product Using Biosensor

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Abstract : Biosensors are analytical devices that use a biological sensing element to detect and measure a specific chemical substance or biomolecule in a sample. These devices are widely used in various fields, including medical diagnostics, environmental monitoring, and food analysis, due to their high specificity, sensitivity, and selectivity. In this research paper, a machine learning model is proposed for predicting the suitability of skin care products based on biosensor readings. The proposed model takes in features extracted from biosensor readings, such as biomarker concentration, skin hydration level, inflammation presence, sensitivity, and free radicals, and outputs the most appropriate skin care product for an individual. This model is trained on a dataset of biosensor readings and corresponding skin care product information. The model's performance is evaluated using several metrics, including accuracy, precision, recall, and F1 score. The aim of this research is to develop a personalised skin care product recommendation system using biosensor data. By leveraging the power of machine learning, the proposed model can accurately predict the most suitable skin care product for an individual based on their biosensor readings. This is particularly useful in the skin care industry, where personalised recommendations can lead to better outcomes for consumers. The developed model is based on supervised learning, which means that it is trained on a labeled dataset of biosensor readings and corresponding skin care product information. The model uses these labeled data to learn patterns and relationships between the biosensor readings and skin care products. Once trained, the model can predict the most suitable skin care product for an individual based on their biosensor readings. The results of this study show that the proposed machine learning model can accurately predict the most appropriate skin care product for an individual based on their biosensor readings. The evaluation metrics used in this study demonstrate the effectiveness of the model in predicting skin care products. This model has significant potential for practical use in the skin care industry for personalised skin care product recommendations. The proposed machine learning model for predicting the suitability of skin care products based on biosensor readings is a promising development in the skin care industry. The model's ability to accurately predict the most appropriate skin care product for an individual based on their biosensor readings can lead to better outcomes for consumers. Further research can be done to improve the model's accuracy and effectiveness.

Keywords : biosensors, data model, machine learning, skin care

Conference Title : ICABBB 2023 : International Conference on Advanced Biotechnology, Biocatalysis and Bioengineering

Conference Location : Rome, Italy

Conference Dates : April 13-14, 2023