THE BEAUTY QUEST: A CUTTING-EDGE PLATFORM TO MANAGE CUSTOMER RELATIONSHIP IN BEAUTY CULTURE INDUSTRY USING MACHINE LEARNING

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ABSTRACT

The beauty culture industry is a fast-growing aspect of the modern capitalistic economy. The traditional system has no capable means to meet customer demand as it uses a mere telephone conversation to record appointments. With the advancements in Information Technology, the productivity of both the customer and market can be emphasized with cutting-edge technologies like Machine Learning (ML) and Image Processing. The proposed system consists of a unique social media platform which gives the opportunity for the customers to pick the best-suited salon and beauticians to share and promote their business, Haircut suggestion module by classifying the face shape using Image Processing techniques, Most Suitable appointment schedule suggestion module by analyzing past behaviour using cosine similarity, No-show Appointment prediction module to predict scheduled but unattained appointments before 12 hours to the allocated time and a platform to conduct their business in a novel way by .providing real-time location tracking and location sharing service which enables beauticians to provide home visit service. A Web application and mobile application both are developed to improve the user-friendliness of the software developed. This system uses the Machine Learning libraries and naïve bayes classification algorithm to recommend the most suitable haircuts to the users and Adaptive Boost algorithm to predict No-Show appointments.

Keywords: Machine Learning, Beauty Culture Industry, Image Processing, Deep Learning