From the Womb of My Suffering, My Life Is in Colors

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Visually impaired women face difficulty identifying the start and end of their menstrual cycle due to the inability to distinguish colors, which negatively affects personal hygiene, independence, and emotional well-being. This project aims to address this issue by developing an audio-based color detection device that assists in recognizing menstrual secretions, along with other daily color recognition needs. A prototype was designed using a TCS3200 color sensor as the input, connected to an Arduino UNO microcontroller, with outputs delivered through a pre-recorded voice system using an SD card and speaker. The system was calibrated to detect six specific colors commonly associated with menstrual secretions. The prototype demonstrated high accuracy in identifying the six preset colors in both indoor and outdoor environments, and on surfaces such as paper and fabric. The device featured clear audio output and was easy to operate, making it suitable for daily use. The Golden Detector empowers blind women to independently monitor their menstrual health through audible color recognition, and lays the foundation for future integration into wearable assistive technologies such as smart canes, helmets, or glasses, enhancing independence and social inclusion

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