

A Personalized UV Radiation Monitoring and Skin Health Protection System

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The "SunSafe" project aims to develop a platform that protects users from the risks associated with ultraviolet (UV) radiation. Unlike standard weather applications, the system personalizes meteorological data based on skin type and dermatological conditions, such as acne stages. The primary challenge involves integrating medical guidelines into an algorithm that accurately determines safe sun exposure duration and personalized protection plans.

To address this, a modern microservices architecture is utilized, integrating several key components:

- **Real-time data processing module:** Ensures continuous data acquisition and processing from external meteorological services (Third-party APIs);
- **Geolocation services:** Precisely identifies user location to ensure the validity of local data;
- **Personalized analytical system:** Performs individual calculations based on user profiles and contemporary medical guidelines for skincare.

The implementation process adheres to fundamental systems engineering principles: UX optimization, containerization, automation (CI/CD), scalability, and data security. This comprehensive approach ensures system flexibility, high availability, and informational resilience. The expected outcome is an interactive system that provides individual recommendations and helps maintain skin health. The project represents a significant step forward in integrating technology with healthcare and promoting preventive medicine.

References

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