FotoFinder

Overview

FotoFinder optimizes patient care, diagnostics, and data security.
It is a cloud-based imaging platform for dermatology, enhancing early skin cancer detection and management. It addresses consolidated patient views, device compatibility and advanced analytics providing dermatologists with cross-platform access, AI-driven image analysis, a detailed patient timeline, and mole-tracking.

Problem Statement

FotoFinder addresses the significant challenges dermatologists face in early skin cancer detection and the effective management of dermatological conditions due to outdated desktop-based imaging systems. These systems often lack interoperability, hindering consistent access to and analysis of skin images across various devices. Furthermore, the absence of advanced analytical tools limits diagnostic accuracy and treatment planning.

Key Challenges

1. **Limited Device Compatibility:** Restricts platform access and data sharing.
2. **Need for Advanced Analytical Tools:** Essential for accurate analysis of skin images.
3. **Lack of Consolidated Patient View:** Difficulty in comparing patient history and images over time.
4. **Inefficient Appointment and Data Management:** Challenges in tracking patient data effectively.

Solution Offered

Fotofinder provides a robust, cloud-based medical imaging solution that improves accessibility, analytics, and interoperability, designed specifically for dermatology and aesthetics. This scalable platform enhances image analysis using AI and ML, supports integration with in-house hardware devices, and maintains high healthcare compliance

standards. Dermatologists gain advanced tools to assess skin types, session frequency, lesion tracking, and more, aiding early diagnosis and treatment of skin conditions.

The platform offers dermatologists a solution that includes:

1. Uniform access across desktop, mobile, and web platforms.
2. Comprehensive doctor dashboards with patient-specific analytics.
3. A consolidated patient timeline with detailed records, including body mapping and lesion tracking.
4. A mole gallery for visual comparisons over time, assisting in effective monitoring.

Core Features/Advantages

1. **Doctor Dashboard:**
   Provides dermatologists with an organized, detailed view of patient-specific data such as skin type, session frequency, lesion records, and patient family history.
2. **Scheduling System:**
   An integrated scheduler to streamline and manage patient appointments directly within the application.
3. **Consolidated Patient Dashboard:**
   Offers a complete view of patient timelines, second opinion requests, excision records, and body mapping sessions for comprehensive treatment management.
4. **Mole Gallery:**
   A gallery where all captured medical images of a patient's skin can be compared over time, aiding in the effective tracking of mole and lesion changes.
5. **Uniform Data Model:**
   A unified data model enables seamless data access across desktop, web, and mobile platforms, ensuring consistency and streamlined data management.

Technical Challenges and Solutions

1. **Challenge:** Migration of the existing WPF application to a cloud-based architecture.
   Solution: Developed a phased migration strategy, ensuring data integrity and system interoperability throughout the transition.

2. **Challenge:** Ensuring healthcare domain compliance and data security.
   Solution: Implemented robust security measures, including encryption and regular compliance audits, to protect patient data.
3. **Challenge:** Integrating AI and ML for enhanced image analysis.
   Solution: Utilized existing AI frameworks and collaborate with data scientists to refine algorithms for better diagnostic accuracy.
4. **Challenge**: Optimizing performance across various platforms.
   Solution: Conducted performance testing and optimization during the development process to ensure efficiency on all devices.

Screenshots: