



**AGENTIC AI-POWERED PREVENTATIVE
CARE: LEADING HEALTH INSURER
ENABLES PATIENTS WITH GUM
HEALTH ASSESSMENT**

DATAMATICS

Prominent international healthcare and insurance provider, focused on driving preventive care and patient empowerment through digital technology.

The Challenge: Ineffective Late Diagnosis of Oral Health Issues

Dental issues are often diagnosed only when symptoms arise, resulting in late treatment. The client wanted a digital-led solution where users could monitor their gum health remotely, without having to go to a clinic.

The Solution: Agentic AI-powered Gum Health Assessment & Analytics

The solution leverages AI-powered image analysis to assess gum health in real time, providing users with instant feedback, historical comparisons, and dental clinic referrals. Administrators gain actionable insights through detailed analytics on user trends.

Key Features & Functional Workflow:

- **Smart Image Capture & AI Analysis:** Users capture gum images with real-time alignment cues, and AI processes them within seconds, detecting conditions like gingivitis or periodontitis and classifying their severity. Immediate results show issues and recommend actions, such as increased flossing or a dental check-up
- **Personalized Recommendations & Appointment Scheduling:** Users are given customized oral health tips based on AI results and can quickly schedule dental appointments with clinics via the app
- **Historical Tracking & Comparative Analysis:** Previous evaluations are retained in a timeline view, with interactive graphs monitoring trends in gum health over time, including inflammation and repeat problems
- **Admin Analytics Dashboard:** The app aggregates frequent gum issues, provides demographic insights (age, gender, location), and tracks user engagement metrics, including scan frequency and appointment bookings, offering a comprehensive view of user behavior and health trends

Technical Implementation:

The system leverages an AI model (Python-based) trained to detect gum diseases with over 80% accuracy, continuously improving through user data and feedback. Agentic AI enhances this process by incorporating human in the loop for better recommendations to users. The middleware and APIs facilitate image processing, user-AI interactions, and clinic integrations, while the SQL database securely stores user assessments, historical trends, and admin analytics. Additionally, cloud storage ensures secure management of image data and assessment records.

Impact: Revolutionizing Oral Health With Early Detection & Scalability

Early Detection & Prevention

Identifies gum issues before they become major, reducing long-term treatment costs

User Empowerment

Enables self-assessment with actionable insights and easy dental visits

Data-Driven Decision Making

Administrators gain visibility into oral health trends

Scalability

Adaptable to large user bases with consistent AI performance

ABOUT **DATAMATICS**

Datamatics enables enterprises to go Deep in Digital to boost their productivity, customer experience, and competitive advantage. Datamatics' portfolio spans across three pillars of Digital Technologies, Digital Operations, and Digital Experiences. It has established products in Intelligent Document Processing, Robotic Process Automation, AI/ML models, Smart Workflows, Business Intelligence, and Automatic Fare Collection.

Datamatics caters to a diverse global clientele across Banking, Financial Services, Insurance, Healthcare, Manufacturing, International Organizations, and Media & Publishing. The Company has a presence across four continents with significant delivery centers in the USA, India, and the Philippines. To learn more about Datamatics, visit www.datamatics.com

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