# COLLEGE OF COMPUTER STUDIES

Bachelor of Science in Information Technology

October 10, 2024

# Christian E. Gaud

# STOO

*City Tourism Culture & Arts Office,*

*Hall of Justice Building, Guinobatan,*

*Calapan City, Oriental Mindoro*

Dear Sir:

Good Day!

We, **Espina, Lance Cedrick F.**, **Ortega, Christ John P.**, and **Gomez, Philip Andrew Jake**, are 3rd-year students taking the Bachelor of Science in Information Technology at MinSU Calapan City Campus. We are currently preparing our title proposal for our capstone project, titled **“Teledentistry 2.0: An AI-Enhanced, Gamified Platform for Patient Engagement”**

**HINDI PA TO AYOS TITLE**

This project aims to develop a comprehensive web-based system for a dentist clinic that enhances patient experience and improves access to dental care. The platform will feature an AI chatbot for real-time assistance, online appointment management, secure payment processing, and a dental health tracker. Additionally, it will include educational resources, community engagement tools, and automated reminders for appointments and follow-up care. We believe this initiative will promote oral health awareness and education by providing a user-friendly platform that reaches a broader audience.

In connection with this, we would like to request permission from your office to conduct research, collect relevant information, and administer surveys. The data collected will be used exclusively for academic purposes to complete our project, which we believe will benefit both your organization and the wider community by enhancing patient care and clinic operations.

This project is one of the titles we are proposing for our capstone project. Our panelists will review the proposal during our title defense, and if selected, we will be granted permission to proceed with the development of this project.

We hope for your kind consideration and a favorable response regarding this request. Your support will not only contribute to the development of this project but will also benefit the clinic and the community. Thank you for your time and consideration. May God bless you.

Respectfully yours,

Respectfully yours,

**Espina, Lance Cedrick F. Gomez, Philip Andrew Jake Ortega, Christ John P.**

Group Leader Group Member Group Member

Noted by:

# CHRISTIAN I. CABRERA,*LPT*

Instructor/Facilitator, Application Development and Emerging Technology

Approved:

# Christian E. Gaud

STOO, City Tourism, Culture & Arts Office

**User Side Functionalities:**

1. **User Registration & Profiles:**
   * **Secure account creation for patients.**
   * **Personalized profiles where users can update their information and manage preferences.**
2. **AI Chatbot Integration:**
   * **Symptom Checker: Patients can input symptoms and get basic diagnostic advice.**
   * **Appointment Booking: Users can book, reschedule, or cancel appointments with the help of the chatbot.**
   * **Dental Care Tips: Offers personalized advice for users based on their profile.**
   * **FAQs: Common questions about dental services answered instantly.**
3. **Visual Gamification Features:**
   * **Interactive Brushing Game: Users can play a game to practice proper brushing techniques. This visually guided game will show correct brush movements, timing, and areas of focus.**
   * **Flossing Game: A virtual flossing game where patients learn correct flossing techniques.**
   * **Healthy Diet Game: An interactive game that educates users about food choices that promote good oral health. Users can choose foods to see how they impact dental health.**
4. **Appointment Management:**
   * **Online calendar for booking, rescheduling, or canceling appointments.**
   * **View upcoming appointments with automated reminders.**
5. **Online Payments:**
   * **Secure online payment portal for services and treatments.**
   * **Invoices generated automatically after payment.**
6. **Dental Health Tracker:**
   * **Track personal dental health, treatments, and progress over time.**
   * **Access dental history, including past appointments and procedures.**
7. **Reminders & Notifications:**
   * **Automated reminders for appointments, treatments, and check-ups.**
   * **Notifications for dental care tips and health recommendations.**
8. **Feedback & Review System:**
   * **Patients can leave feedback and rate their experiences after each visit.**
   * **View and respond to reviews left by other patients.**
9. **Resource Library:**
   * **Access educational videos, articles, and infographics on dental health topics.**
10. **Community Engagement:**
    * **Participate in clinic-hosted webinars, events, and workshops.**
    * **Stay updated with blog posts and news on dental care and clinic services.**

**Admin Side Functionalities:**

1. **User and Patient Management:**
   * **Admins can manage user accounts, profiles, and patient records.**
   * **View a patient's dental history and manage their treatment plans.**
2. **AI Chatbot Management:**
   * **Admins can update chatbot responses and train it with new dental care advice.**
   * **Monitor the chatbot’s performance and user satisfaction.**
3. **Appointment Management:**
   * **View and manage all booked, rescheduled, or canceled appointments.**
   * **Send reminders and update dentist availability in real-time.**
4. **Online Payments & Billing:**
   * **Monitor payments, generate financial reports, and issue invoices.**
   * **Set prices for services and manage refunds when necessary.**
5. **Dental Health Tracker Management:**
   * **Update treatment plans and set reminders for follow-ups.**
   * **Review patient progress through their health tracker.**
6. **Visual Gamification Management:**
   * **Create, update, and manage visual games like brushing, flossing, and healthy diet selections.**
   * **Track user engagement with these educational games.**
7. **Feedback & Review Management:**
   * **Admins can view patient feedback and address concerns.**
   * **Generate reports to evaluate patient satisfaction.**
8. **Resource Library Management:**
   * **Add and update articles, videos, and other resources in the educational library.**
   * **Ensure materials are regularly updated and accurate.**
9. **Promotions & Notifications:**
   * **Send bulk notifications for promotions, appointment reminders, or health tips.**
   * **Manage promotional content and event announcements.**
10. **Reports and Analytics:**
    * **Generate reports on appointments, payments, and user engagement.**
    * **Use insights to improve clinic operations and enhance patient care.**

**Overview of the AI-Integrated Dentist Clinic Website with Visual Gamification**

The **AI-Integrated Dentist Clinic Website** is a hybrid platform designed to enhance the overall patient experience and streamline clinic operations. It offers features accessible across web, mobile, and desktop platforms, making it convenient for both users (patients) and administrators (clinic staff) to interact with the system.

At its core, the platform combines AI-powered chatbot support with visual gamification features to make dental care more engaging and educational for patients. The system supports essential functionalities like appointment management, online payments, and health tracking, while also promoting dental health through interactive games that teach proper brushing, flossing, and diet habits.

**User Side Overview**

Patients can register and manage their profiles, book appointments, and receive instant help from an AI chatbot that offers dental care advice, symptom checkers, and scheduling assistance. Users can also play visual dental care games, track their dental health progress, and make secure online payments. The platform provides notifications and reminders for upcoming appointments and health tips. Additionally, users have access to a comprehensive resource library filled with educational content and a community engagement platform to stay connected with dental events and webinars.

**Admin Side Overview**

Administrators can manage patient accounts, appointments, and clinic operations efficiently through an intuitive interface. The system allows clinic staff to track payments, manage user feedback, and provide personalized care by updating dental health trackers. Additionally, the admin panel includes the ability to update and manage visual games, ensuring patients have access to the latest educational tools. Through the AI chatbot management and analytics tools, the admin team can ensure patients receive high-quality support while optimizing clinic performance with real-time data and reports.

**Key Features**

* **AI Chatbot** for appointment scheduling, symptom checking, and dental advice.
* **Visual Gamification** with interactive brushing and flossing games.
* **Appointment Management** allowing patients to book and modify appointments.
* **Online Payments** with automated invoicing.
* **Dental Health Tracker** for patients to monitor their treatment progress.
* **Reminders & Notifications** for upcoming appointments and personalized dental tips.
* **Resource Library** with educational content on dental care.
* **Community Engagement** through webinars and events.
* **Admin Panel** for managing patient records, appointments, payments, and feedback.