

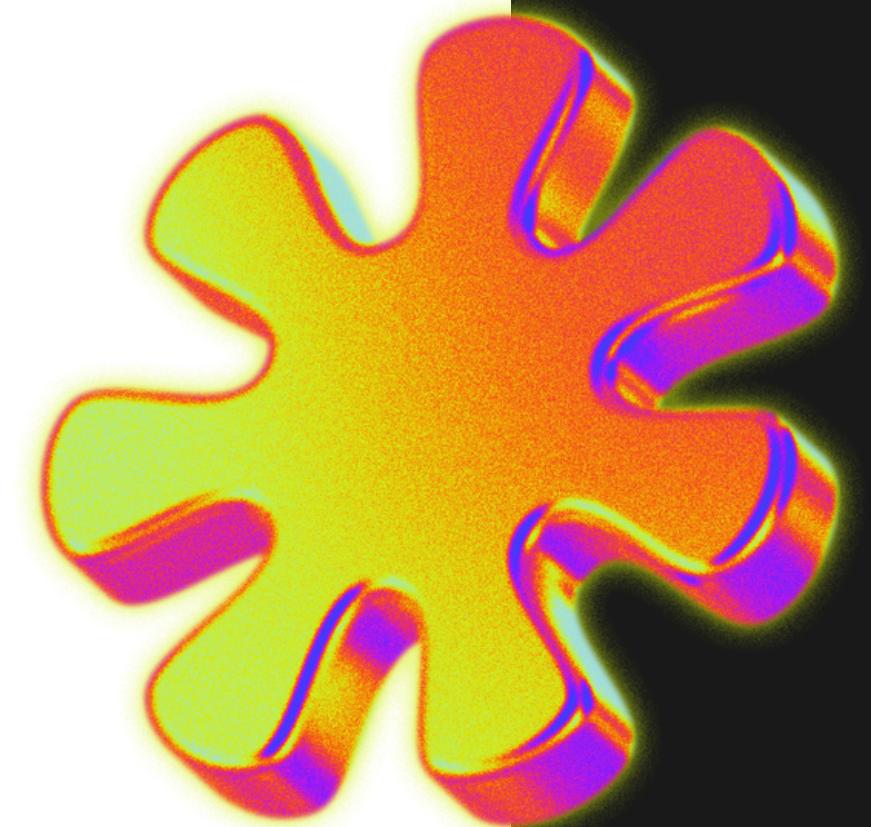


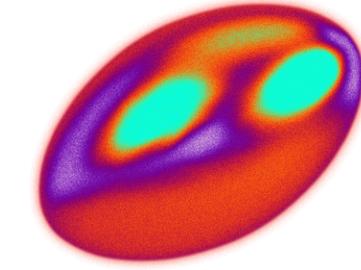
SOFTWARE ENGINEERING II

LAGUNA PROVINCIAL HEALTH OFFICE **MEDICAL ASSISTANCE INDIGENT PROGRAM RECORDS SYSTEM**

ORIGINALLY DEVELOPED BY:

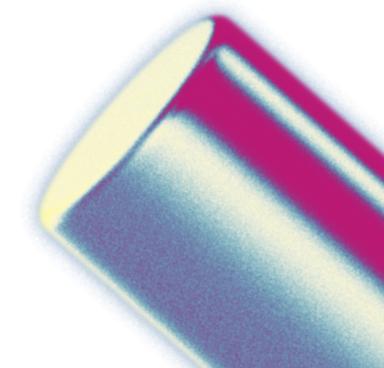
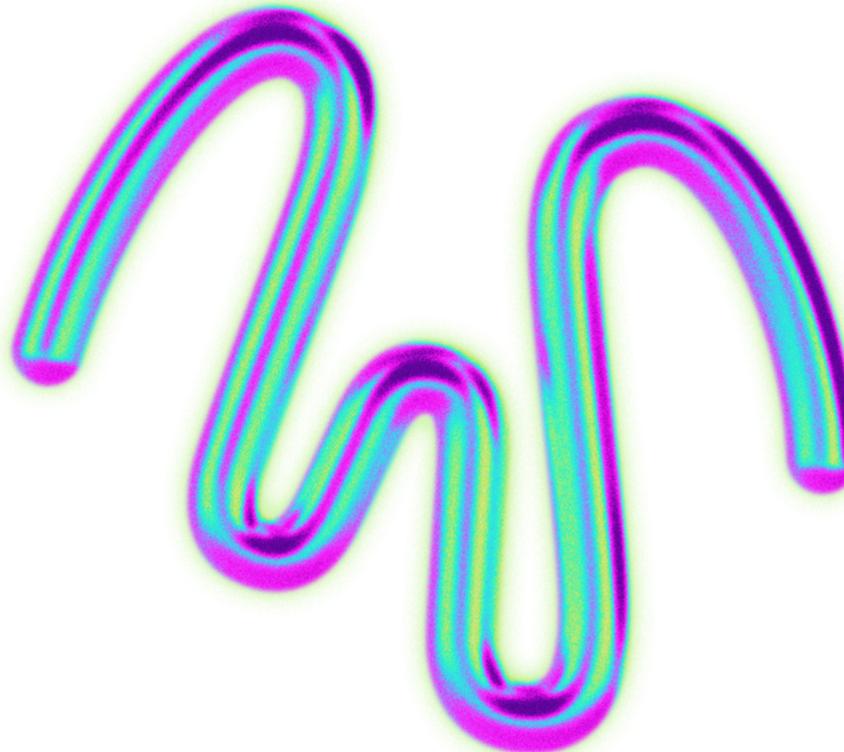
Agda, Marc Jasell P.
Balala, Kyla Z.
Peñales, Jay-ar G.





Members

- **Sofer, Erl Teodemar D.** Project Lead, Full-Stack Developer, Documentation Owner
- **Coronado, Nixon E.** Chatbot Developer, Quality Assurance, PPT Documentation
- **Bagalso, Riana Alexis D.** SRS Documentation
- **Alcantara, Alyssa Mae D.** Tester
- **Ledesma, Jhon Carlo F.** Tester
- **Orellano, Kyla V.** Tester





Background

Access to healthcare in the Philippines is tough for marginalized groups, especially for poor Filipinos who can't afford medical care. Even with government programs like the Universal Health Care (UHC) law and PhilHealth, many still face high out-of-pocket costs, which can lead to financial difficulties. In 2019, out-of-pocket expenses made up 53.9% of total health spending, putting a strain on low-income families.

To help, the Laguna Provincial Health Office (PHO) started the Medical Assistance Indigent Program (MAIP). However, this program struggles mainly due to issues with managing patient records. Without a central system for data, it's hard to find, save, and use medical records quickly when needed. This inefficiency can lower service quality and create problems with fairness and accountability in distributing resources.

To fix these problems, the study suggests creating a simpler Records Management System for the Laguna PHO. This system would make accessing medical records faster, help with scheduling appointments, and automate assistance delivery. It aims to provide timely and accurate medical services to needy patients while ensuring fair and transparent resource distribution through organized records.





Initial Scope



The design and development of the records management system for the Laguna Public Health Office's MAIP involved several important steps.

First, the current records management practices were assessed to identify problems and inefficiencies, such as issues with data accuracy and security. Next, a basic framework was created to outline the system's key features and how to implement it, based on user needs and preferences. Recommendations were made to improve the system, aiming to streamline processes, enhance data accuracy, strengthen security, and increase efficiency. Specific features were designed, including an easy-to-use interface for document storage and searching. The system was developed using programming tools like PhpStorm, PHP, HTML5, CSS, JavaScript, jQuery, and XAMPP with MySQL.



DARK MODE

Dark Mode is a feature that enables users to switch to a darker theme in the app, enhancing comfort when using it in low-light conditions. This not only reduces eye strain but also gives the app a modern and sleek appearance, making it visually appealing to users.

OVERALL QUALITY OF LIFE IMPROVEMENTS

Parts of the system were improved, mostly the backend, which included the fallback mechanism that simplifies the initial setup of the database, making it easier for developers to get started with the app. Another is revamping the dashboard, creating a dedicated analytics page with much more detailed analyses on data, and fixing bugs within the initial system.

KEY ENHANCEMENTS

FEATURES THAT WERE IMPLEMENTED INTO THE SYSTEM



DEDICATED PATIENT ANALYTICS PAGE (DATA MINING)

This feature offers admins a specialized page to view and track patient-related information. It visualizes important details, such as the number of records entered and patient data, monthly expenditures, financial summary, municipality performance, and breakdowns of patient data including patient statistics, age distribution, and requests per municipality. This dedicated page makes it easier to manage and monitor patient records, ensuring that all key information is easily accessible to those who need it.

SIMPLE TUTORIAL RULE-BASED CHATBOT (MACHINE LEARNING)

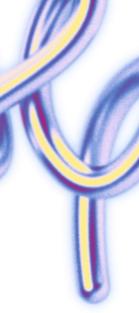
This is an easy-to-use chatbot that helps users explore the app by providing step-by-step instructions. It is designed to follow specific paths, making it straightforward to assist users with common tasks and questions. This structured approach helps make the onboarding process smoother, allowing new users to become familiar with the app quickly. Setting it up and using it is also simple, making it accessible to everyone.

KEY ENHANCEMENTS

FEATURES THAT WERE IMPLEMENTED INTO THE SYSTEM



SOFTWARE ENGINEERING II



Laguna Provincial Health Office Record Management System | ADMIN

Dashboard Coordinator/s Requestor/ Patient List Municipality Analytics Signout

Dashboard

Home / Dashboard

Dark Mode

Reduce eye strain with an elegant dark palette for extended usage.

New System Integrations

AI Assistant

Get instant help from our intelligent chatbot for features and docs.

Advanced Analytics

Interactive data insights and visual tools for informed decisions.

LAGUNA PHO ADMIN

Laguna Provincial Health Office
Record Management System

Welcome to our new improved and streamlined system designed to unify and simplify health record management across the Province of Laguna.

Dark Mode

Reduce eye strain with an elegant dark palette for extended usage.

New System Integrations

AI Assistant

Get instant help from our intelligent chatbot for features and docs.

Advanced Analytics

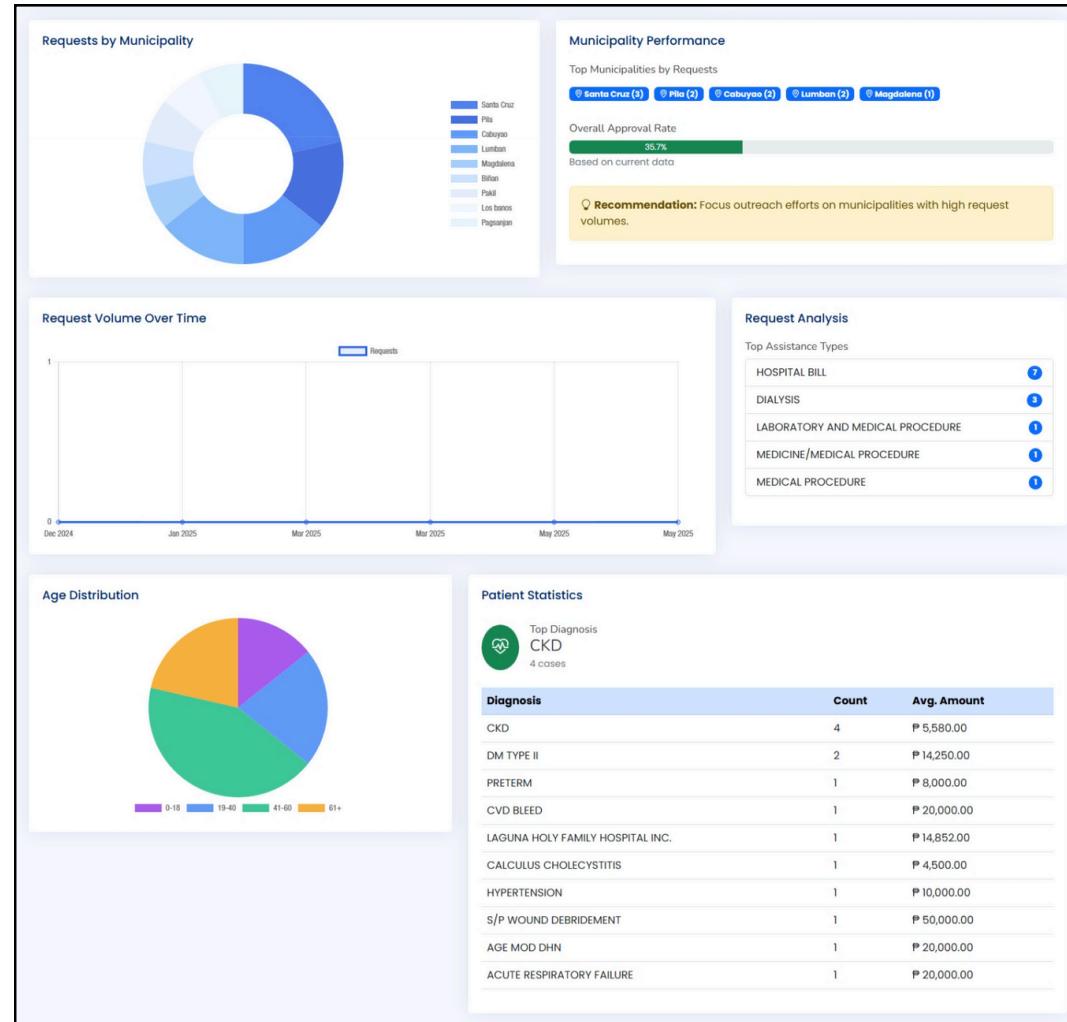
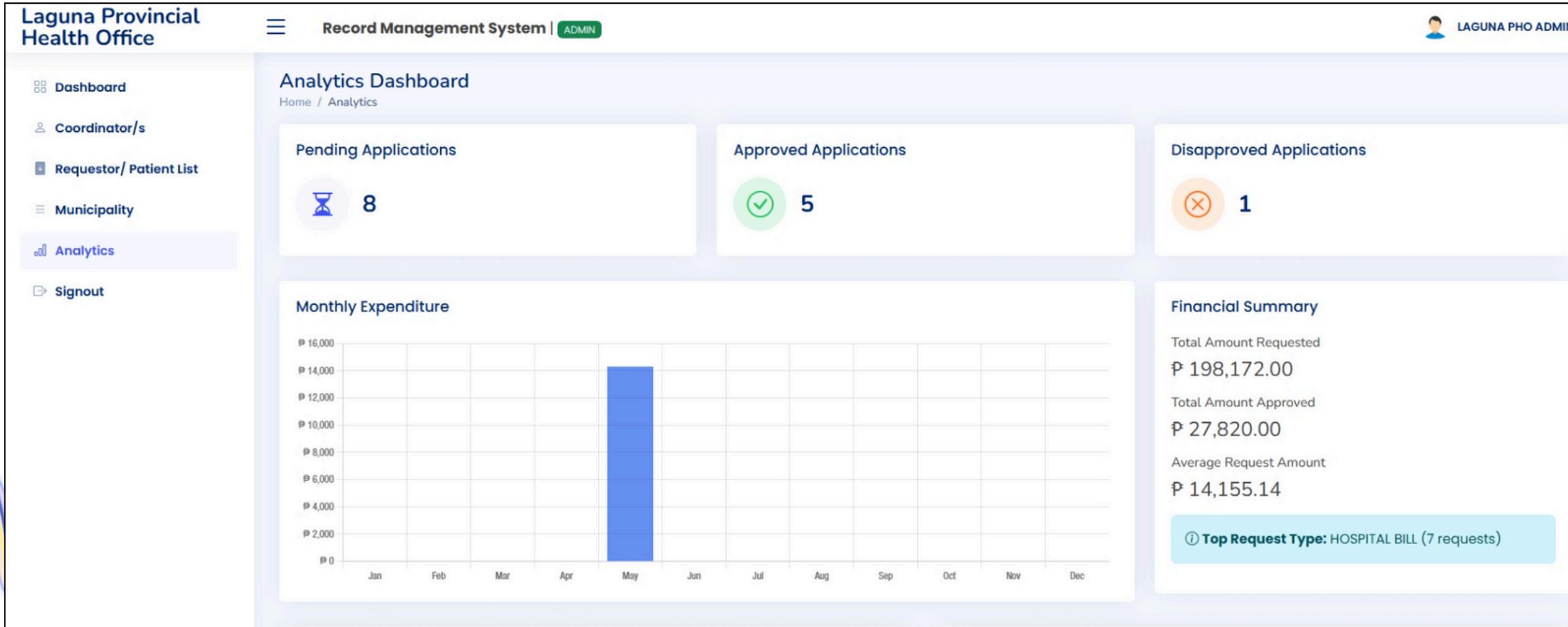
Interactive data insights and visual tools for informed decisions.

LAGUNA PHO ADMIN





SOFTWARE ENGINEERING II





SOFTWARE ENGINEERING II

Laguna Provincial Health Office Record Management System | ADMIN LAGUNA PHO ADMIN ▾

Dashboard Home / Dashboard

Coordinator/s Requestor/ Patient List

PHO Assistant

Hello! How can I help you today?

Hello! What features are available to the admin?

Admins have complete control of the system. From their dashboard, they can manage users, update patient data, add municipalities, and analyze system reports.

Type your question...

AI Assistant instant help from our intelligent chatbot for features and docs.

New System Integrations

Advanced Analytics Interactive data insights and visual tools for informed decisions.



Learnings



In this project, we learned a lot about integrating different systems that use various programming languages. For example, we successfully added a chatbot that was created in Python into a system built with PHP. To do this, we needed to understand how to let these two different systems communicate, which we accomplished with the help of the Flask extension called Cross-Origin Resource Sharing (CORS). This made it possible for the website and the chatbot to communicate safely, even though they came from different sources.

Additionally, we created dynamic data visualizations that were linked directly to the database. We also used data mining techniques to help the system find important patterns and insights from raw data in real time.

A major part of our learning involved working with and improving a system that someone else had already developed. This meant we had to understand how the original developers designed their work, including their thought process, workflows, and code structure, so we could effectively add new features and improve existing ones without breaking anything in the system.

THANK YOU!