

AI-HEALTHCARE: IMPROVEMENT OF HEALTHCARE IN TIMOR-LESTE WITH
SMART DIGITAL SOLUTIONS



UNDERGRADUATE THESIS

Submitted as one of the requirements to obtain Sarjana
Komputer (S.Kom.)

By:

JONATHAN ROCKY PUTRA MONTEIRO

012202200049

FACULTY OF COMPUTING INFORMATICS
STUDY PROGRAM CIKARANG

AUGUST, 2025

SIMILARITY INDEX REPORT

Jonathan Rocky Putra Monteiro

Jonathan Thesis

 Thesis Computing

Document Details

Submission ID

trn:oid:::3618:114915697

Submission Date

Sep 29, 2025, 10:35 PM GMT+7

Download Date

Sep 29, 2025, 10:38 PM GMT+7

File Name

Jonathan Thesis.pdf

File Size

3.3 MB

31 Pages

4,017 Words

23,912 Characters



7% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.

Filtered from the Report

- ▶ Bibliography
- ▶ Quoted Text

Match Groups

- 
27 Not Cited or Quoted 7%
 Matches with neither in-text citation nor quotation marks
- 
0 Missing Quotations 0%
 Matches that are still very similar to source material
- 
0 Missing Citation 0%
 Matches that have quotation marks, but no in-text citation
- 
0 Cited and Quoted 0%
 Matches with in-text citation present, but no quotation marks

Top Sources

- 4%  Internet sources
- 2%  Publications
- 5%  Submitted works (Student Papers)

*% detected as AI

AI detection includes the possibility of false positives. Although some text in this submission is likely AI-generated, scores below the 20% threshold are not surfaced because they have a higher likelihood of false positives.

Caution: Review required.

It is essential to understand the limitations of AI detection before making decisions about a student's work. We encourage you to learn more about Turnitin's AI detection capabilities before using the tool.

Disclaimer

Our AI writing assessment is designed to help educators identify text that might be prepared by a generative AI tool. Our AI writing assessment may not always be accurate (i.e., our AI models may produce either false positive results or false negative results), so it should not be used as the sole basis for adverse actions against a student. It takes further scrutiny and human judgment in conjunction with an organization's application of its specific academic policies to determine whether any academic misconduct has occurred.

Frequently Asked Questions

How should I interpret Turnitin's AI writing percentage and false positives?

The percentage shown in the AI writing report is the amount of qualifying text within the submission that Turnitin's AI writing detection model determines was either likely AI-generated text from a large-language model or likely AI-generated text that was likely revised using an AI paraphrase tool or word spinner.

False positives (incorrectly flagging human-written text as AI-generated) are a possibility in AI models.

AI detection scores under 20%, which we do not surface in new reports, have a higher likelihood of false positives. To reduce the likelihood of misinterpretation, no score or highlights are attributed and are indicated with an asterisk in the report (*%).

The AI writing percentage should not be the sole basis to determine whether misconduct has occurred. The reviewer/instructor should use the percentage as a means to start a formative conversation with their student and/or use it to examine the submitted assignment in accordance with their school's policies.

What does 'qualifying text' mean?

Our model only processes qualifying text in the form of long-form writing. Long-form writing means individual sentences contained in paragraphs that make up a longer piece of written work, such as an essay, a dissertation, or an article, etc. Qualifying text that has been determined to be likely AI-generated will be highlighted in cyan in the submission, and likely AI-generated and then likely AI-paraphrased will be highlighted purple.

Non-qualifying text, such as bullet points, annotated bibliographies, etc., will not be processed and can create disparity between the submission highlights and the percentage shown.



ABSTRACT

This research aims to develop a web-based medical consultation management system using the Django framework. The system is designed to facilitate digital interactions between patients, doctors, and administrators in the medical consultation process. Patients can register for consultations online, receive schedule reminders, and access their consultation history. Administrators play a role in approving or rejecting consultation requests, managing user data, and monitoring healthcare service statistics through a dashboard.

Doctors can directly view approved consultation appointments and provide diagnoses to patients based on the daily schedule. This approach streamlines the consultation process without requiring additional steps for booking or assigning appointments. In addition, the system provides access to patient history and includes a diagnosis recording feature that assists doctors in follow-up actions.

The key features developed include: user authentication based on roles (admin, doctor, patient), consultation schedule management with a daily queuing system, patient consultation history, an automated consultation reminder system, an admin statistical dashboard, and an interactive health chatbot with conversation history. The system is also equipped with email verification for users and access security settings based on each role.

The development method used is the Waterfall model, which includes requirements analysis, system design, implementation, and testing stages. Testing was conducted using the black-box method to ensure all system functions operate according to the defined objectives.

The final result of this research is a web application that enhances the effectiveness and efficiency of the medical consultation process while supporting structured and integrated digital healthcare services.

TABLE OF CONTENT

ABSTRACT.....	9
DEDICATION.....	10
ACKNOWLEDGMENTS.....	11
TABLE OF CONTENT.....	12

CHAPTER I.

I. INTRODUCTION.....	11
1.1 Background.....	11
1.2 Problem Statement.....	12
1.3 Objectives.....	12
1.4 Scope of Work.....	13
1.5 Methodology Overview.....	14
1.6 Report Structure.....	14

II. LITERATURE REVIEW

2.1 Password Reset System Using Email OTP.....	16
2.2 Role-Based Access Control (RBAC).....	16
2.3 Responsive Interface Design for Mobile Devices.....	17
2.4 AI-Based Health Chatbot.....	17

2.5 WhatsApp Integration.....	17
-------------------------------	----

III. SYSTEM DESIGN AND ANALYSIS

3.1. Project Overview.....	19
3.2. Functional Modules Developed.....	19
3.3. Doctor Password Management.....	20
3.4. Chatbot Development and Integration.....	21
3.5. Mobile-Friendly Interface Implementation.....	21
3.6. Technologies and Tools Use.....	22
3.7. Interface Design for Patient Password Reset Feature.....	22

CHAPTER IV – IMPLEMENTATION AND TESTING

4.1 Implementation of Password Reset System with OTP.....	23
4.2 Password Change Feature for Doctors.....	24
4.3 Doctor List and WhatsApp Links.....	25
4.4 Role-Based Access Control (RBAC).....	26
4.5 Chatbot Development and Integration.....	27
4.6 Responsive Design for Mobile Devices.....	28
4.7 Testing and Debugging.....	30

V. INDIVIDUAL CONTRIBUTIONS AND IMPLEMENTATION SUMMARY

5.1 Technical Contributions in System Development	
5.2 Reflection and Personal Responsibility.....	

VI. CONCLUSION & REFLECTION

6.1 Conclusion.....	
---------------------	--