



**CryptiDocs: A Safe and Open Web-Based Document Management System
Employing Role-Based Access Control and Metadata Encryption**

UNDERGRADUATE THESIS

Submitted as one of the Requirements to obtain

Sarjana Komputer

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SCREENSHOT OF ZEROGPT

The screenshot displays the GPTZero AI Detection web application. The browser address bar shows the URL `app.gptzero.me`. The page title is "CryptiDocs: A Safe and Open Web-Based Document Management System Employing Role-Based Access Control and Metadata Encryption UNDERGRADUATE THESIS". The document is submitted as one of the requirements to obtain a Sarjana Komputer degree by ASYIFADIA AQILA FAUZAN, ID 001202200130, from the Faculty of Computer Science, Informatics Study Program, Cikarang, August 2025. The document is copyrighted by ASYIFADIA AQILA FAUZAN in 2025.

The "Basic scan" results show a "human" detection with a probability breakdown of 1% AI generated, 1% Mixed, and 98% Human. The text "We are highly confident this text is entirely human" is highlighted. The "Advanced Sentence Scanning" section shows the sentence "In my capacity as an active student of President Un..." as one of the most human sentences.

The interface includes a sidebar with navigation options: New, Home, Documents, and Chrome Ext. The top right corner has buttons for Feedback, Sign up, and Log in. The bottom right corner has a "Scan" button and a note: "Scan to update results 5,000 characters 703 words".

ABSTRACT

In today's digital landscape, the secure management of documents has become an increasingly critical concern for organizations. Challenges such as unauthorized access, lack of transparency, and limited control over document authenticity pose significant risks. To address these issues, **CryptiDocs** was developed as a secure, web-based document management system that employs Role-Based Access Control (RBAC), metadata encryption, SHA-256 hashing, and activity logging to ensure data integrity, traceability, and compliance.

This individual report outlines my specific contributions to the development of **CryptiDocs**. I was responsible for designing and implementing the entire frontend of the system using HTML, CSS, and JavaScript. Key components such as the login and register pages, dashboard, document upload interface, sent and received lists, activity log display, and administrator panel were developed to offer intuitive navigation and clean, responsive layouts for users. These components were built to integrate smoothly with the backend and reflect role-based access without implementing the authentication logic itself.

In addition to frontend development, I served as the team leader, overseeing project coordination, communication, and timeline management. I also compiled and finalized all formal documentation required throughout the capstone process, including Form-1 to Form-5. Moreover, I designed and produced the demo video, presentation slides, promotional poster, and hardcopy guides for system installation and user operation.

This report presents the methodology, design process, implementation results, and challenges encountered during the project. It also reflects on the skills and lessons gained from this multidisciplinary role. Overall, **CryptiDocs** offered not only a solution to pressing document management issues but also a platform for practical growth in frontend development, documentation, and project leadership.

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