

**DESIGNING COPTAS AS A COFFEE LEAF DISEASE  
DIAGNOSTIC APPLICATION BASED ON  
MACHINE LEARNING**

**THESIS**

Submitted in Partial Fulfillment of the Requirements  
for the Degree of Sarjana Pendidikan  
in the English Language Education Study Program



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This thesis has been approved by the advisors and has met the requirements and is considered feasible to be submitted to the thesis examination.

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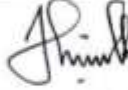

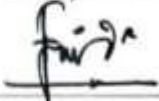

## RATIFICATION

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## STATEMENT OF WORK'S ORIGINALITY

Except where references is made in the text of the thesis, this thesis contains no material published elsewhere or extracted in whole or in part from a thesis or any other degree or diploma.

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All project procedures reported in this thesis were approved by the projector's advisors and did not break any faculty or university project ethics.

Sintang, 17 July 2024



Caku

## **MOTTO**

“There is no success without hard work. There is no success without togetherness.  
There is no ease without prayer.”

**Ridwan Kamil**

"Change lives.  
Change organizations.  
Change the world"

**Stanford's Graduate School of Business**

No dream is too high. No dream should be underestimated. Soar as high as you  
want and reach as high as you can.

**Maudy Ayunda**

## **DEDICATION**

In the name of the Father, Son, and Holy Spirit, all praise and gratitude are due to Him, who has given strength, patience, and perseverance in completing this thesis. All praise and thanks are due to the Lord Jesus Christ.

This thesis is dedicated to:

First, the writer dedicates this thesis to beloved parents, Father Paulus Aban and Mother Margarita Awi. Secondly, the writer extends heartfelt gratitude to the entire extended family, who consistently provide unwavering support in all endeavours.

## ABSTRACT

Caku. Designing Coptas As A Coffee Leaf Disease Diagnostic Application Based On Machine Learning. Thesis. English Language Education Study Program of STKIP Persada Khatulistiwa. Advisor I: Sijono, M.Pd. Advisor II: Tuti, M.Pd.

**Keywords:** machine learning, coffee leaf, disease diagnosis, mobile application

COPTAS is a machine learning-based application designed to diagnose coffee leaf diseases such as rust, miner, and phoma, and identify healthy leaf conditions. In addition, COPTAS provides appropriate treatment recommendations based on the diagnosis results. The development of this application uses the ADDIE model, which consists of five stages: Analysis, Design, Development, Implementation, and Evaluation. This application aims to improve accuracy in the diagnosis of coffee leaf diseases while overcoming the limitations of manual methods that are time-consuming and prone to human error. Evaluation was conducted through two stages: internal testing by the development team and external testing through presentations in front of mentors and other teams at Bangkit Academy. Based on the evaluation results, COPTAS proved effective in analyzing coffee leaf diseases and providing accurate diagnosis results. Overall, the app functions well and is reliable. Further development is recommended, especially in improving the user interface and expanding the scope of disease types that can be diagnosed, so that the benefits for coffee farmers are optimized.

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