RICEETA: ON-DEVICE INTERFERENCE FOR RICE LEAF DISEASE DIAGNOSIS AND TREATMENT

An Undergraduate Thesis

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In Partial Fulfillment

of the Requirements for the Degree of

Bachelor of Science in Information Technology

By

Danica Marie A. Lebrilla

Lennox G. Luis

Prince Deo S. Solanib

Aris Ernst Tabaque

June 2022Approval Sheet

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Aris Ernst Tabaque

Approved:

REGIN A. CABACAS, Ph.D.

Adviser

CYRENEO DOFITAS JR., MSCS MA. BETH S. CONCEPCION, DIT

Chair, Information Technology Dean, CICT

June 2022

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Danica Marie A. Lebrilla

Lennox G. Luis

Prince Deo S. Solanib

Aris Ernst Tabaque

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# Abstract

Rice is the staple food in the Philippines and identifying a rice disease in the early stage will prevent a massive loss and high quality of production for the farmers. This study developed a mobile application to help farmers accurately identify and provide recommended solutions for rice leaf diseases. The application can capture rice leaf diseases in real time using object detection algorithms. The model was generated by gathering images of different rice leaf diseases, classifying them, and uploading them on the Teachable Machine, a web-based tool that creates machine learning models. With this, the model that has been generated can classify each type of rice leaf diseases from one another.

The application also contains capabilities that allow the farmer to identify the area where the image was taken and summarizes the total rice disease captured for the month using graphs and tables.

The performance evaluation was rated Very Satisfactory in terms of the overall performance of the application and a test case for disease detection yielded a 100% accuracy rate.

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