MAIDEN: A WEB-BASED VOICE ASSISTANT FOR COMMON COMPUTER SOFTWARE PROBLEMS

A Thesis Presented to the Faculty of the
College of Communication and Information Technology
President Ramon Magsaysay State University
Castillejos, Zambales

In Partial Fulfillment of the Requirements for the Degree
Bachelor of Science in Computer Science

By:
Antonio, Chris John Kerbey G.
Duriman, Timothy Daniell D.
Elayda, Daryl Jane C.

June 2023

Republic of the Philippines
PRESIDENT RAMON MAGSAYSAY STATE UNIVERSITY
(Formerly Ramon Magsaysay Technological University)
Castillejos Campus
Castillejos, Zambales

APPROVAL SHEET

The thesis project entitled **"Maiden: A Web-based Voice Assistant for Common Computer Software Problems"** was prepared and submitted by **Chris John Kerbey Antonio, Timothy Daniell Duriman, Daryl Jane Elayda** in partial fulfillment of the course requirementsfor the degree of **Bachelor of Science in Computer Science** has been examined and recommendedfor the oral examination.

MICHAEL M. FARIN, MSCS
Thesis Adviser

Approved by the Panel of Examiners
with a rating of 87 %

MICHAEL G. ALBINO, MIT
Chair

IRATUS GLENN A. CRUZ, MSCS
Member

MARIE CELIA R. AGLIBOT, MSCS
Member

Accepted and approved as a requirement for the degree of **BACHELOR OF SCIENCE IN COMPUTER SCIENCE.**

IVY H. CASUPANAN, EdD
Campus Director

June 2023
Date

ABSTRACT

This thesis presents "Maiden," a web-based voice assistant designed to address the common computer software problems faced by barangay employees. In the current digital era, computers have become essential tools in various fields, including local government agencies like barangays. However, many barangay personnel lack technical understanding and experience, leading to difficulties in resolving software issues. These limitations hinder productivity and cause frustration as employees struggle to overcome common software problems efficiently.

To address this issue, the research focuses on the development and implementation of Maiden, a web-based voice assistant. Maiden leverages advancements in natural language processing, contextual awareness, and provide efficient and accessible support to barangay employees. Through the use of Maiden's natural language interaction, step-by-step coaching, and contextual information retrieval features, users can troubleshoot more easily.

The researchers used a survey questionnaire based on the domain of the ISO 25010 Software Quality Standard. Maiden received a rating with a weighted mean of (3.56) for performance and efficiency, (3.59) for usability, (3.54) for reliability, and (3.57) for maintainability and portability. Maiden: A Web-based Voice Assistant Technology for Common Computer Software Problems gained "Strongly Agree" as an overall result from IT experts and respondents across all domains covered by the survey.

Based on the evaluation results from IT experts and respondents, the researcher concluded that Maiden can provide a convenient and efficient way for users to troubleshoot computer software problems using voice commands.

Applied artificial intelligence and machine learning techniques to solve computer software problems. It is therefore recommended to enhance the user experience and use more centralized data for Maiden make it easier to store and retrieve data, which would improve the accuracy of the results.