

THE DEVELOPMENT OF ANDROID-BASED 3D SIMULATION DISASTER MANAGEMENT

**A Thesis Presented to the Faculty of the
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President Ramon Magsaysay State University
Castillejos, Zambales**

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

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APPROVAL SHEET

The thesis project entitled "**The Development of Android-Based 3D Simulation Disaster Management**" was prepared and submitted by **Rex D. Alones, Jonnas Emmanuel M. Hermocilla, and Resty S. Nieva** in partial fulfillment of the course requirements for the degree of **Bachelor of Science in Computer Science** has been examined and recommended for the oral examination.


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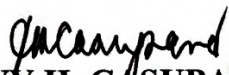

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ABSTRACT

Conducting disaster drills can be challenging due to difficulties faced by the host and participant, along with communication barriers. To address this, researchers developed an Android app using Blender for 3D animation, Unity as the game engine, and Adobe Photoshop for vector images. The aim was to improve the efficiency of conducting drills, making administration easier while reducing time and effort.

This study utilized an applied research design to address specific difficulties or problems, employing the Agile Methodology, a trusted approach in software development. The evaluation of the application was conducted using a modified-adapted questionnaire based on ISO 25010. Ratings for functional suitability (3.70), performance efficiency (3.58), compatibility (3.60), usability (3.71), reliability (3.75), maintainability, and portability (3.65) received a "Strongly Agree" overall from IT experts and target respondents. The researchers effectively created an interactive, user-friendly application that simulates disaster management and guides during and after disasters, suitable for all users on Android.

Recommendations highlight improving performance efficiency and compatibility. It is suggested to install the application on devices with a minimum of 4GB RAM. Incorporating relevant visual elements, like school-related objects, would enhance the user experience. The application can be implemented as a risk-mitigation tool for the BFP (Bureau of Fire Protection) during fire drills and earthquake drills. Its practical application extends beyond PRMSU Castillejos Campus, making it beneficial for other institutions as well.

Keywords: *(3D Animation, Risk Mitigation Tool, Drill).*