**Group Name:**

* **Maneja, Carlo P.**
* **Pelayo, Francis Jorge A.**
* **Tolibas, Aljieo**

**Capstone**

**Adviser:**

* **Mapalo, Adam Ken M.**

**Project Title: JieoBot: A mobile application to enhance disaster-safe preparedness by incorporating augmented reality pathfinder for navigation within the structural layout of building floor maps**

**Project Description**

The JieoBot project uses augmented reality (AR) to determine the safest route inside a given building floor map, with the goal of revolutionizing navigation in complicated situations. It can be quite difficult to navigate through new or changing environments, like busy public venues, emergency rooms, or enormous buildings. The goal of this project is to provide a strong and clever solution to improve navigation safety. Conventional navigation systems frequently can't adapt to changes in the surroundings in real time or offer warnings about possible safety risks. By using augmented reality (AR) technology to scan and analyze floor plans, JieoBot aims to overcome this constraint by identifying potential risks and constantly updating the safest path in response to changing circumstances. The project aims to address a number of scenarios, such as everyday navigation in big establishments such as malls and big company buildings.

Metrics:

* Navigation Safety: Number of incidents both before and after the deployment of JieoBot.
* User Contentment: End-user feedback obtained via usability testing and surveys.
* Scalability: Effective execution in a variety of settings.

**Project Features**

**AR Floor Plan Scanning:**

Benefit: Offers a dynamic, real-time depiction of the surroundings using Augmented Reality (AR) when scanning the floor.

Criteria:

* Rendering of the floor plan is accurate.
* Speed and efficiency of scanning process.

**Real-Time Path-finding**

Benefit: Based on the current environment, the safest path is dynamically calculated and updated.

Criteria:

* Adaptability to alterations in the surroundings.
* Path recommendations' accuracy.

**Risk-Management Algorithm**

Benefit: Recognizes any safety risks in the area being examined.

criteria:

* precise identification of hazards.
* promptness in evaluating and revising data on hazards.

**User-Friendly Interface**

Benefit: Improves situational awareness and offers precise navigational recommendations.

Criteria:

* User opinions on how intuitive the interface is.
* Effectiveness of safety information communication

Dependencies and Relationships:

* Real-Time Path-finding and the Risk Assessment Algorithm requires AR Floor Plan Scanning to function properly and assess the safest route possible.
* The successful integration of Real-Time Path-finding and Risk Assessment Algorithm is essential for a User-Friendly Interface helps the user navigate the app so that they can swiftly scan and get the necessary route.

Expected Results and Outcomes:

* a dynamic and accurate picture of the floor plan.
* Recognizing and promptly updating possible safety risks.
* Real-time path recommendations that are accurate and responsive.
* A user interface that is intuitive and enhances situational awareness.