Flood Prediction and Mitigation System for a Safe and Sustainable Cities

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Potential Market

User lives in flood prone area

relevant authorities

Homeowners

NGOs

Introduction

Natural Disaster

lead to financial loss and harm to human

Relies on top-down Approach

time- and cost-consuming

Flood Cause

Continuous heavy rain

River water overflows

Rising of tide

Blocked drainage

Unsafe land-use practices

- Currently, the flood management system in Malaysia relies on the **top-down approach.**
- It may lead to the **late response** and only response **after the fact**
- The **insufficient infrastructure, inadequate emergency response plans**, and **limited public awareness** lead to heightened vulnerabilities and exacerbate the impacts of floods.

Problem Statement

Main Idea

- Refer to the Peraturan Tetap Operase (**PTO**) Bencana
- Separate the disaster handling to **pre-**, **during-** and **post-** action
- Specify each roles in flood

Pre- action

- Promote awareness
- Flood Data Prediction

During action

- Victim integration
- Resource estimation
- Evacuation center map

Post action

- resource needed list for donation

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Feature

1. **Victim Integration** using **scan** IC or passport
   - The required info is based on PTO Bencana listed
2. **Evacuation Center Map**
   - It gets the current location of users then shows the nearby evacuation center
3. **Checklist**
   - It is implemented to **remind** the user what's' need to bring or to do
4. **Road Report**
   - use **AI** in the **frequent Q&A**

Impact to Society

SDG 11

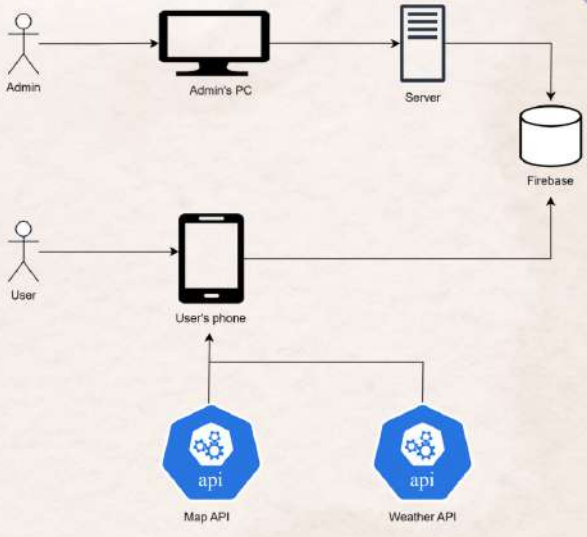
Increase the number of people receiving early warnings and taking protective action

Enhancing preparedness and resilience of at-risk communities.

Decrease the number of people affected by floods

Reduction in economic losses due to flooding, relative to GDP

System Architecture



User Interface (UI)