

**Public Warning Chatbot** 

Improving Public Warning Messages



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#### Agenda

- 1. Meet your Speaker
- 2. Problem Statement and Solution
- 3. Chatbot Goals
- 4. Solution Overview
- 5. CAP Integration
- 6. Multi-language Support
- 7. Chatbot screenshots

# 1. Meet your speaker



#### Sasha Sukhinich

Intern Software Engineer

- 3rd year Software Engineer student in Saxion.
- Originally coming from Ukraine
- Joined one2many (an everbridge company) as an Intern.
- Working on the chatbot to implement multi-language support

### 2. Problem Statement and Solution



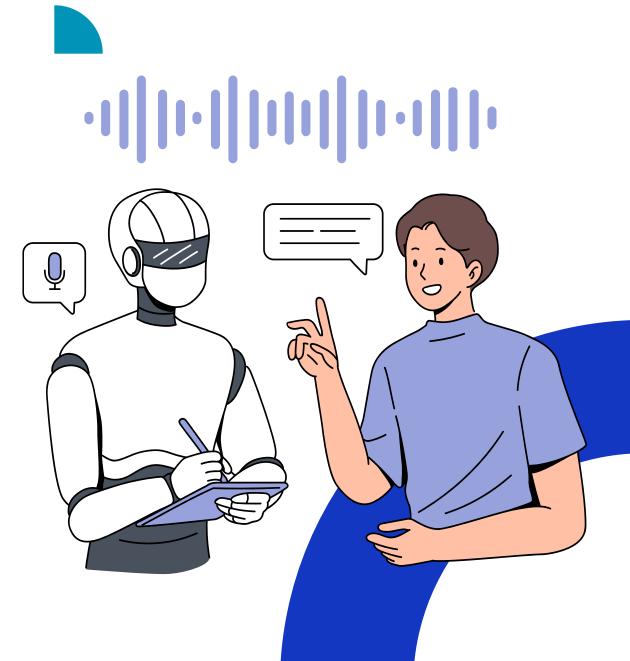


# 3. Chatbot goals

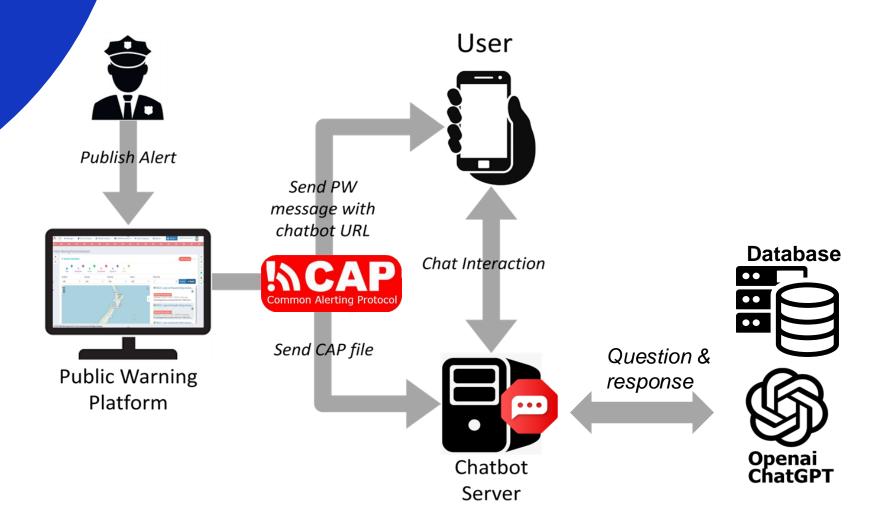
Public Warning Chatbot – software, that delivers a timely and accurate emergency information.

#### The goals are:

- 1. Deliver extensive information
- 2. Multi-language support
- 3. Reduce traffic
- 4. Enabling a user feedback loop



### 4. Solution Overview





#### DeepL

- Machine Translation Tool
- Used for translating CAP

#### ChatGPT, OpenAl

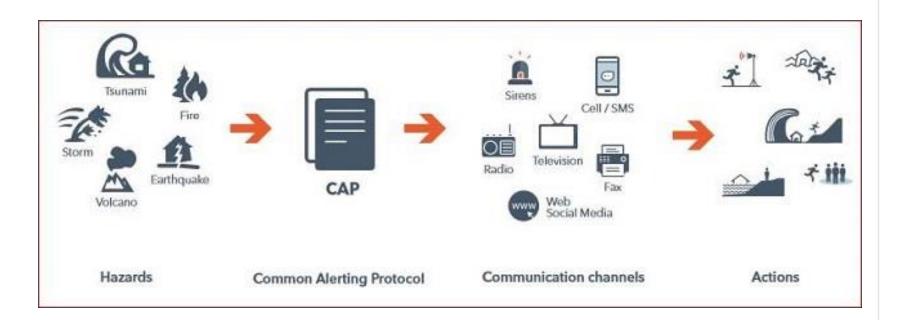
- General Purposes Large Language Model
- Prompt engineered to answer like an emergency manager using CAP alert
- Can answer a broader range of questions and add a bit of creativity in the answering
- Used for translations

#### 4. Overview Al usage

### 5. CAP Integration

#### **CAP - Common Alerting Protocol**

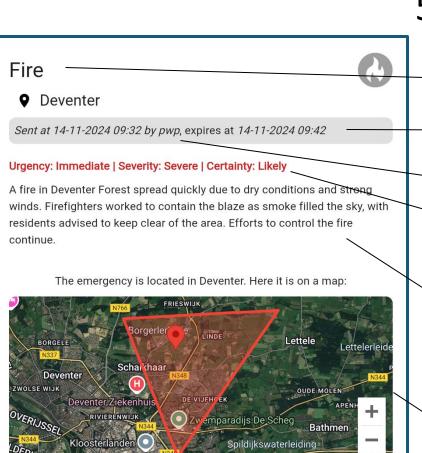
Purpose: Standardized format for emergency alerts and public warnings.



#### Key Features:

- Multi-Channel Distribution: Sends alerts via radio, TV, SMS, internet, etc.
- Interoperability: Integrates with various alerting systems.
- Pattern Detection: Identifies emerging threats.

#### 5. CAP Integration



"event":"Fire"

"effective":"14-11-2024 09:32", "expires":"14-11-2024 09:42"

"sender":"pwp"

"urgency": "Immediate", "severity": "Severe", "certainty": "Likely"

"description": "A fire in Deventer Forest spread quickly due to dry conditions and strong winds. Firefighters worked to contain the blaze as smoke filled the sky, with residents advised to keep clear of the area. Efforts to control the fire continue."

"locationName":"Deventer",

"location": "52.28308,6.18489 52.24154,6.21175

52.28568,6.26123 52.28308,6.18489"



Ask a question

My location



### 5. CAP Integration

Example user question: "What should I do?"

#### CAP Details

The name of the disaster is Fire in Deventer forest!

The description of the disaster is A fire in Deventer Forest spread quickly due to dry conditions and strong winds. Firefighters worked to contain the blaze as smoke filled the sky, with residents advised to keep clear of the area. Efforts to control the fire continue.

The location of the disaster is **52.28308,6.18489 52.24154,6.21175 52.28568,6.26123 52.28308,6.18489** 

The headline of the disaster is Fire in Deventer forest!

The urgency of the disaster is **Immediate** 

The severity of the disaster is **Severe** 

The certainty of the disaster is **Likely** 

The event type of the disaster is **Fire** 

The date of the disaster is 14-11-2024 09:32

The disaster is located at **Deventer** 

# Static Context

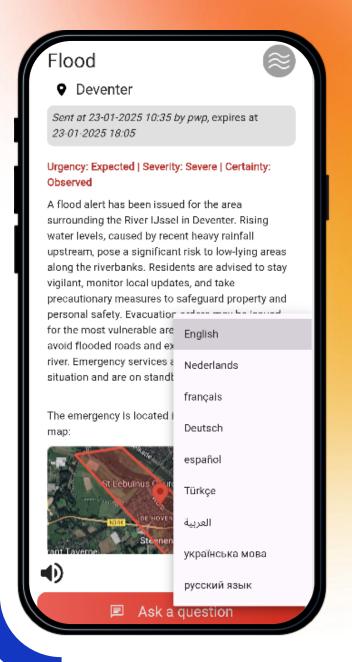
Only use the information above to answer the user's questions. Do not use any other information. Please answer the question in the language, the user asked the question. Think before answering!

#### Question

As an emergency manager, can you answer: "What should I do?"

# 6. Multi-Language Support

- Recognition of user's preferred language.
- The interface is fully supporting predefined languages.
- Chatbot responses provided in the preferred language.





#### Flood Deventer Sent at 23-01-2025 10:35 by pwp, expires at 23-01-2025 18:05 Urgency: Expected | Severity: Severe | Certainty: A flood alert has been issued for the area surrounding the River IJssel in Deventer. Rising water levels, caused by recent heavy rainfall upstream, pose a significant risk to low-lying areas along the riverbanks. Residents are advised to stay vigilant, monitor local updates, and take precautionary measures to safeguard property and personal safety. Evacuation for the most vulnerable are English avoid flooded roads and exriver. Emergency services & Nederlands situation and are on standt français The emergency is located i Deutsch español Türkçe العربية українська мова русский язык Ask a question

### 7. Examples

Choose Dutch(Nederland)



#### Urgency: Expected | Severity: Severe | Certainty: Observed

A flood alert has been issued for the area surrounding the River IJssel in Deventer. Rising water levels, caused by recent heavy rainfall upstream, pose a significant risk to low-lying areas along the riverbanks. Residents are advised to stay vigilant, monitor local updates, and take precautionary measures to safeguard property and personal safety. Evacuation orders may be issued for the most vulnerable areas. Travelers are urged to avoid flooded roads and exercise caution near the river. Emergency services are actively monitoring the situation and are on standby to provide assistance.

The emergency is located in Deventer. Here it is on a map:



My location

4)



Ask a question

# 7. Examples

Press button "My location"



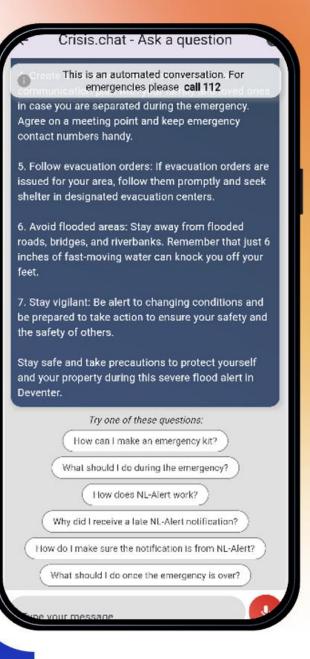


# 7. Examples

Crisis.cnat - Ask a question This is an automated conversation. For emergencies please call 112 How can I be of service? You are chatting in English Try one of these questions: How can I prepare? How can I make an emergency kit? What should I do during the emergency? How does NL-Alert work? Why did I receive a late NL-Alert notification? How do I make sure the notification is from NL-Alert? What should I do once the emergency is over?

Press on suggestion chip with question "How can I prepare?"

Response retrieved from database



### JIISIS.CIIat \* ASK a questioi

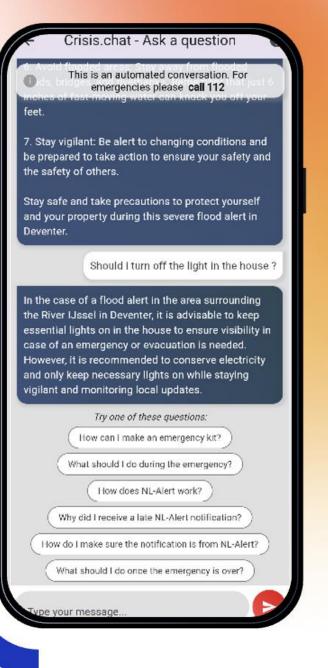
Ask custom question in the input field "Should I turn off the light in the house?"

> Response generated by ChatGPT



# 7. Examples

This is an automated conversation. For emergencies please call 112 in case you are separated during the emergency. Agree on a meeting point and keep emergency contact numbers handy. 5. Follow evacuation orders: If evacuation orders are issued for your area, follow them promptly and seek shelter in designated evacuation centers. 6. Avoid flooded areas: Stay away from flooded roads, bridges, and riverbanks. Remember that just 6 inches of fast-moving water can knock you off your 7. Stay vigilant: Be alert to changing conditions and be prepared to take action to ensure your safety and the safety of others. Stay safe and take precautions to protect yourself and your property during this severe flood alert in Deventer. Try one of these questions: How can I make an emergency kit? What should I do during the emergency? How does NL-Alert work? Why did I receive a late NL-Alert notification? How do I make sure the notification is from NL-Alert? What should I do once the emergency is over? Should i turn off the light in the house ?







# Any question?

https://crisis.chat https://crisis.chat

For further questions contact:

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