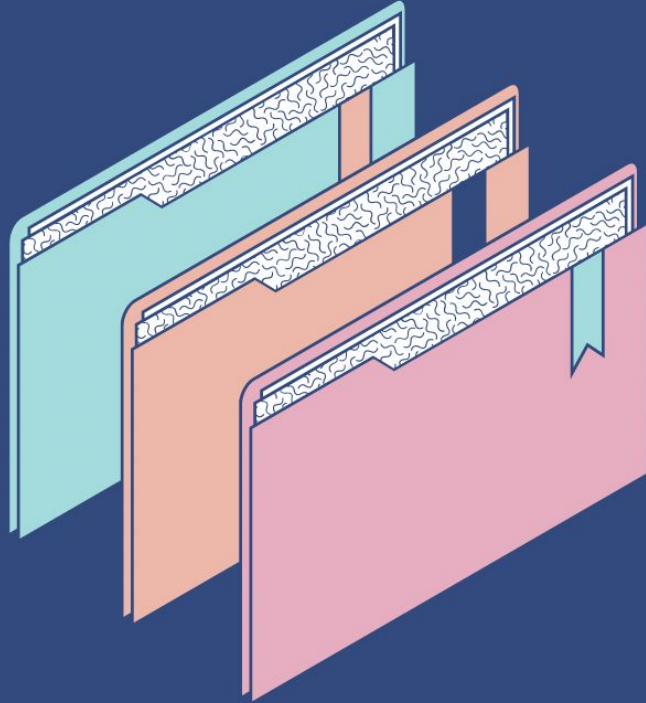




SIMULATION

# Emergency Chatbot

Andrea Soteldo

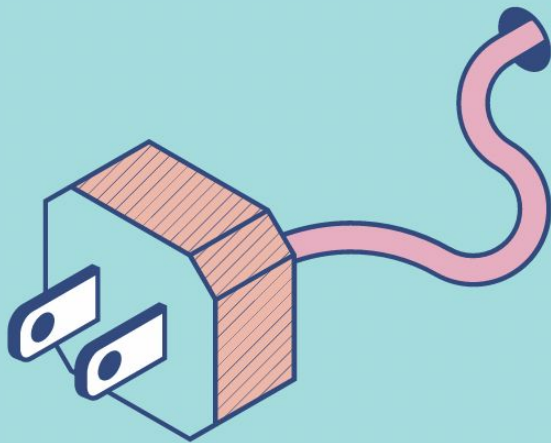


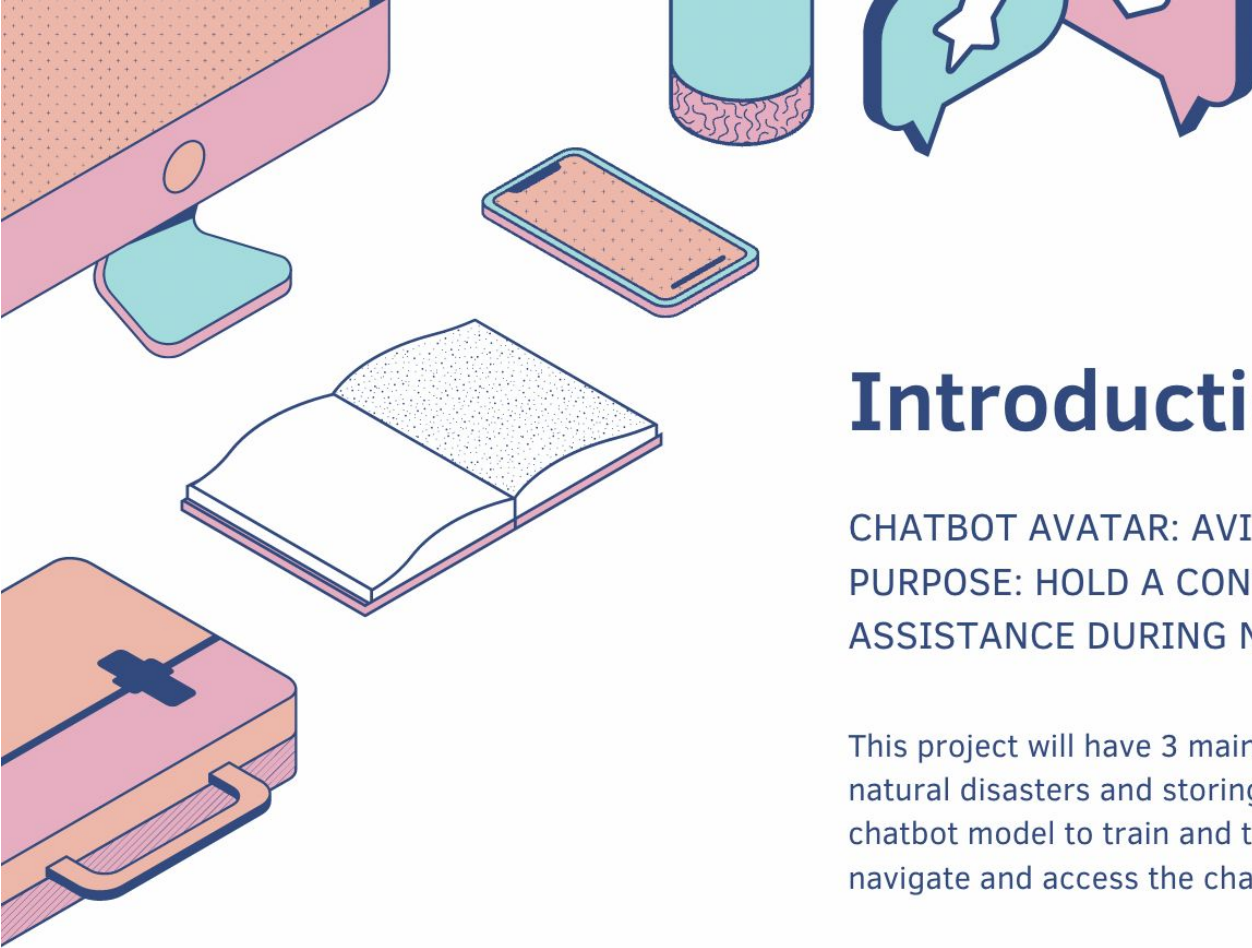
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# Abstract

Implemented in Python, this is a messaging application that performs live chat functions in response to real-time user interactions during natural disasters. Due to time constraints, the research will mainly focus on the efficiency of the chatbot in answering simple questions and making changes as deemed necessary.





# Introduction

CHATBOT AVATAR: AVILA

PURPOSE: HOLD A CONVERSATION REGARDING  
ASSISTANCE DURING NATURAL DISASTERS.

This project will have 3 main parts: collecting keywords related to natural disasters and storing them in a dataset, developing a chatbot model to train and test, and creating a UI that a user can navigate and access the chatbot.

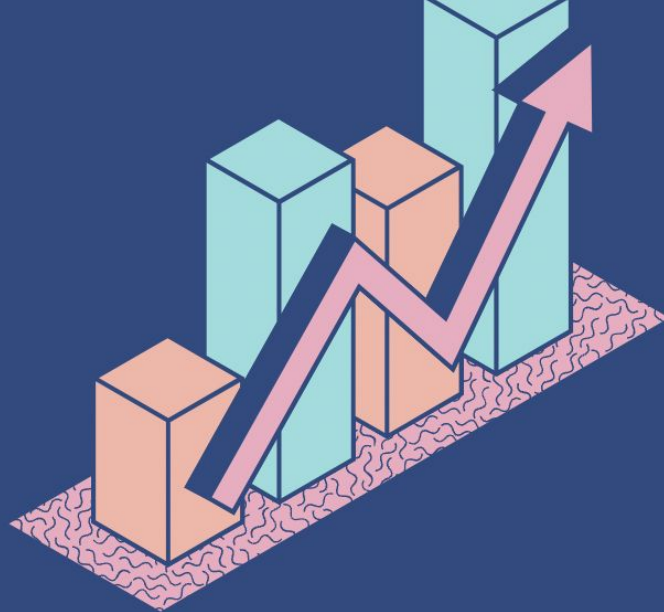
# Design and Implementation

## PROGRAM FEATURES:

The landing page allows the user to access and interact with the chatbot.

The user can request information concerning the following issues:

- Shelter OR electricity
- Water
- Food
- Hygiene products
- Emergency/medical assistance
- Educational resources
- Mental health
- Pet
- Connect with person



## TECHNOLOGIES USED

- Python
- JavaScript
- HTML
- CSS
- Flask

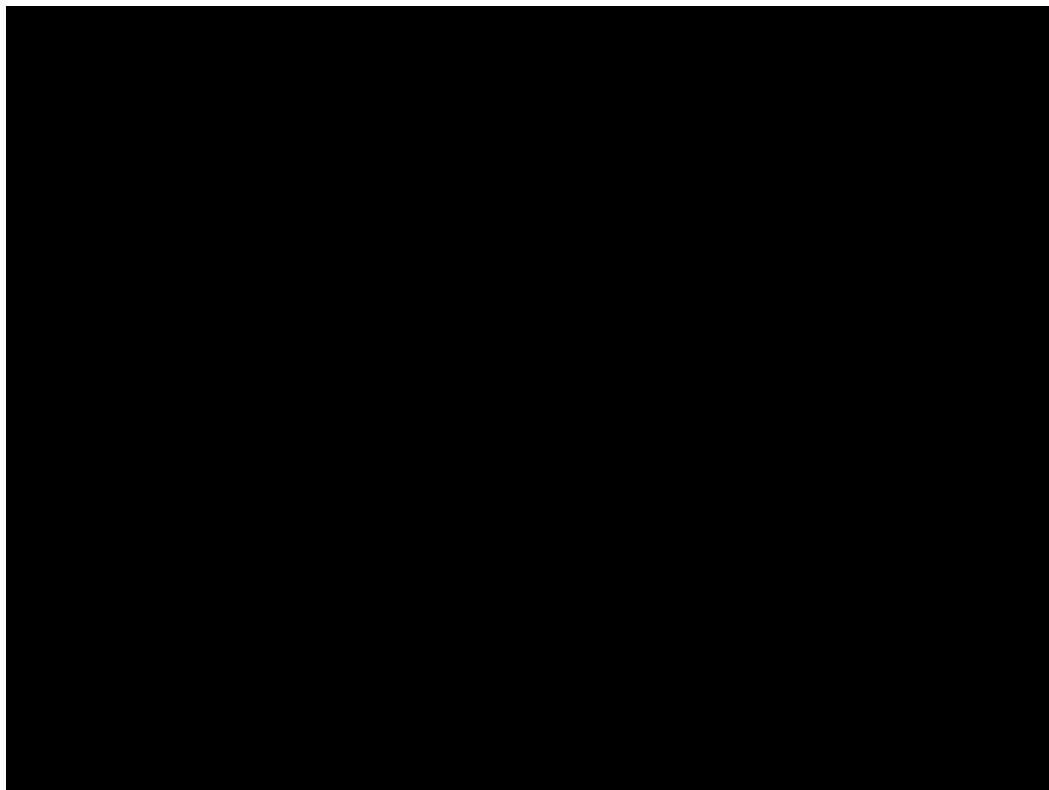
# Demo

```
Hi! I'm Ávila. I'm here to assist you during natural disasters.
```

```
What's your full name?
```

```
User: C
```

# Demo





# Challenges

## Unclear Requirements

Not having a clear view of the requirements from the start can result in inefficiency.

## Poor Scheduling

Poor scheduling can cause required tasks to not be completed by the deadline.

## Stretched Resources

Resources include time, skills, money, tools and manpower. Lacking any one of these creates risk factors.

## Operational Changes

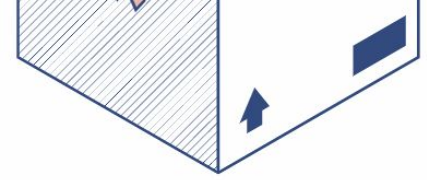
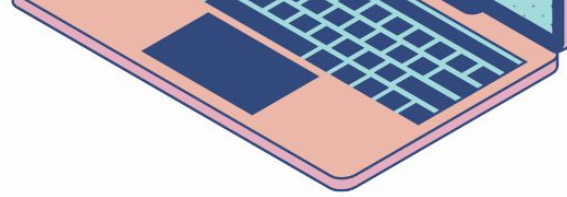
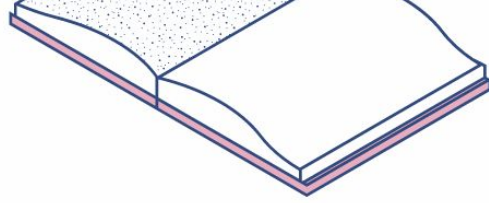
Changes in procedures, such as an unanticipated shift in responsibilities is an example of operational risk.

## System Integration

It may be necessary to work on the system offline before integrating it with the production system after it is complete and well tested.







## Pros

- No learning curve
- Simple UI, even if the back-end is complex
- No internet connection required with SMS

## Cons

- Limited GUI

# Future research directions

## Define ML parameters

Improve on implementation

---

## Meet the requirement analysis

The system needs to meet the functional requirements

---

## Digital Economy Strategy and Energy Infrastructure

Collect data about user behaviors and preferences



## Conclusion

- Chatbots act as a bridge between users and first responders
- This is a simple rule-based chatbot simulation
- Deep Learning and Natural Language Processing (NLP) is also being looked at

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# Thank you

Any questions?

