**Call For Code - Team - UX Bulls**

**Team Members**

* Sabyasachi Chowdhury (Team Lead)
* Khushboo Jain (Developer)
* Ankita Ghosh (Developer)
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**Project Title**

Project Messiah

**Project Description**

It is a mobile application that can be downloaded from Google Playstore once it is available. For the current release we have targetted the Android devices.

**Current Problem**

Disasters are unavoidable circumstances. But lots of lives can be saved by creating awareness programmes and smart alerts. Also, loads of lives can be saved by deployment of proper help at correct times. However, the entire community has to work together to overcome a disaster and the damage caused by the disaster.

**Solution Description**

Project Messiah is an android application that provides many computational models and predictive models, which can work with the forecasting of the disasters. It also automates the disaster management, by efficiently deploying proper disaster teams based on the disaster incident language intent analysis. It also provides the user with an in-hand application to trigger the disaster SOS.

**Included Components**

Below is the list of IBM Cloud Resources we have used in Project Messiah

* IBM Machine learning
* IBM Weather API
* IBM Image Visualizer Service
* IBM chat assistant
* IBM Tone Analyzer
* IBM NLP analysis
* IBM DB2 database
* IBM Cloud Foundry app (.NET Platform)
* IBM TWILIO messaging API
* .NET Core SDK for middleware
* IOT Service

**Featured Technologies**

* Ionic framework
* Cordova framework
* Android Platform Studio
* HTML/SCSS/typeScript

**Architecture Diagram**

For architecture diagram, please refer to this [deck](https://github.com/khushboo-jain-kj/messiah/blob/master/CFC_Cognizant_UXBulls.pptx).

**Steps**

* [Messiah application](https://youtu.be/ZdzFI3-5mgc) - This URL has the demonstration of the running version of the application.
* [Messiah ideation](https://youtu.be/rgXuS-Nds4s) - This URL has the Messiah deck presentation
* [Here](https://github.com/khushboo-jain-kj/messiah/blob/master/messiah.apk) is the application download link

**Results and improvements**

* Improvement in the smart navigation algorithm to navigate the user out of the disaster affected zone considering the parameters like - road traffic, image analysis of the disaster affected roadways.
* Implementation of the mobile **wi-bots** that can carry messiah IOT devices in the disaster affected areas.
* Implementation of the satellite image analysis based on the RGB differential correction of the disaster affected area - taking the color difference of the images to calculate the area of the disaster affected zone and show it to user on the map.
* Implementation of modelling of the safe houses and the real time capacity of the safe house with the help of the clustered phone data.
* Improvement of fully automated AI bot to deploy the disaster teams based on the user's input and validation of the score on the truthfulness of the news - a set intersection score between the area news headlines, satellite image and the disaster prediction score model. We can also ask for user's true situation validation.
* Improvement in the NLP analysis to auto-classify the incident with minimum inputs from the user.
* Integration with the Facebook events to bring out the disaster management event programs and share them to the disaster social workers.