# Project Research Document

# Weather Bot

X00126628 Tudor Voda

## Section 1 Detailed Discussion

Using Angular for my frontend and NodeJS for my backend. The application will have a bot using Microsoft bot framework, the bot will use LUIS for Language Understanding to understand the user and to answer. The bot will access a weather API called APIXU. The API is coded in Express framework for Node.js. Will then gather and display the weather to the user using Microsoft Adaptive Card. The application uses the browser location with a call to Azure Maps to get the user location. That the users do not need to type in the city. Using a Mongo Database to store the user accounts. The user can register an account on the application and their passwords are encrypted using Bcrypt. The user will have a dashboard that they can edit their profile. The application will be deployed on Azure and the database on Mongo Atlas.

## Section 2 Existing Applications in this domain

|  |  |  |
| --- | --- | --- |
| **Name** | **Similarities** | **Differences** |
| Wear Weather | Detailed information about the weather  Type in location | Bot functionality  Shop that recommends what clothes to wear |
| Brella - Personal Weather | Detailed information about the weather  Notifications | Bot functionality  A picture of thermometer indicating the temperature  Notifications |
| Oshare Weather | Detailed information about the weather  Notifications | Bot functionality  Picture of an avatar what you should wear  Notifications |

## Section 3 Platform, Technologies and Libraries

Use Angular for the frontend

Use Microsoft bot framework

LUIS (Language Understanding Intelligent Service)

Express framework for Node.js to call the weather app that the bot will use.

MongoDB and Mongo Atlas

APIXU, weather API

Azure Maps

Microsoft azure for deployment.

## Section 4 The risks

The Microsoft Bot not working or LUIS not working, which means the bot will not answer to the user or it will answer the wrong thing in the worst case the bot will crash. The app is depended on the weather API to work accurate otherwise it will display the wrong information about the. Interface or the bot may not behave the way they should. Everything is a potential risk, as every component support each other to function correctly.