

# Weather Site(My Weather Chatbot)

\*Note: Sub-titles are not captured in Xplore and should not be used

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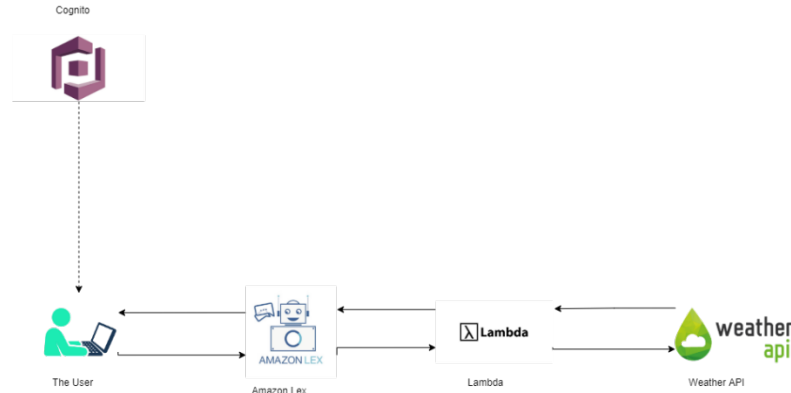
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**Abstract**—A lot of our day to day life goes around everyday weather. Weather is responsible for all life on earth from rain water to bacteria killing sunlight. Weather information is crucial to plan our day and prepare for an upcoming snow, rain, hail, cold weather etc. Having weather data also helps track global warming and how much our earth is being affected over the years. Weather is and always will be a key factor of our existence, so it makes sense for us to use everything we have to track and maintain it the way it should be.

## I. INTRODUCTION TO WEATHER SITE

It is very simple to use our Weather chatbot to get information on millions of cities around the world. Once loaded into the website link, he/she is prompted to login to the webpage or can also sign up the person is a new user. If the user does select sign up, they will need to fill out Username, Email, password and phone number and click on sign up. Then the user is sent an email that contains a verification code in order to verify the email. After verification user can log in and is now ready to chat with our weather chatbot. In the case that a old user forgets his/her password they have an option on the login page that says “reset your password”, Upon clicking on it the user may reset their password.

Once the User has access to their account and want to chat with their chatbot, they can simply greet the bot, and the bot will reply back by asking their name and later greeting them back. The user can ask for weather alongside city in the same question then the bot will fetch the information and give it to the user. In case that the user only says “What is the Weather today?” The bot will reply back with “Sure, Which city?”, the user can then specify the location he/she is looking for and get the weather information. In the case where the user enters a wrong city or something that the bot does not recognize, the bot then responds with a “Sorry, I do not understand” or a similar error message to let the user know that something they entered is not recognizable.



## II. RESOURCES

### A. AWS

Amazon Web Services is a cloud computing platform that provides servers, storage, networking, remote computing, email, mobile development, and security. AWS has many features are super useful in this online era of cloud computing. AWS generated about 13 percent of total amazon revenue as of Quarter 2 of 2021. It is also very trusted and reliable service provider. We used some of its features for our project in building weather chatbot.

### B. Amazon LEX

Amazon LEX allows us to create conversational interface that uses text or voice as input. Our chatbot also uses amazon lex in order to identify what user is asking and how to reply to it. When the user utterance matches with an intent, using lex the bot is able to provide an answer. If the intent is not met the bot then goes back to a default error message to display the user.

### C. AWS Lambda

AWS Lambda runs our code whenever it is needed or when a situation is triggered. When amazon lex intent is met and need to get weather information for a particular city, it then triggers Lambda functions to go get that information from the Weather API that contains all the data. Lambda is a very powerful and useful resource that helps connect users queries with the result.

Identify applicable funding agency here. If none, delete this text box.

#### D. AWS IAM

IAM also known as AWS Identity and Access Management is an amazon web service that helps control the who has access to AWS resources. With IAM we are able to secure the access to resources and determine who has the access to change certain parts of the weather site.

#### E. Cognito

AWS Cognito is a service from amazon that lets us create a secure log in and signup page for the users. We used Cognito in our webpage to give user a secure page to log in and use our chatbot.

#### F. Amplify

We used AWS Amplify to authenticate the user, Use the java libraries and to trigger the Lambda functions. Amplify makes it easy for us developers to be able to front end development.

#### G. Node JS

Node.js is a highly efficient library written in JavaScript for real-time applications, as it facilitates handling multiple client requests, enables sharing and reusing packages of library code, and the data sync between the client and server happens very fast. These are the reasons we have chosen node.js as our backend backbone

### III. CONCLUSION

It has been a huge learning experience working on this project and we all gained a more in dept knowledge of cloud computing and how it works for webpages. Using these numerous number of AWS services gave us a perspective on how advanced Amazon's Web Services were and how big of a role they play in this internet world. In Deployment we had to reuse different versions of node.js and angular, this really tested our troubleshooting skills and gave us the opportunity to deeply understand these concepts. Using Amazon Lex was fascinating to see how many features it had and could do really amazing things with it. Everyone in our group was enthusiastic and willing to learn in order to create a program that represented our ideas.

November 1-5	Worked on selecting topic for the projects by reading multiple blocks, articles, etc.
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November 6-10	Creating a Bot using Amazon lex and entered intent which will be showed to the user and slot to store the city name. Also tried deploying on AWS console by just passing return parameter. So that we check our bot.
November 11-15	Connected lambda service to our BOT and connected third party API.
November-16-20	Build Cognito service and give permission for authenticated users.
November 21-30	Tried preparing the presentation and final report for the project. We also deployed it in the last week of November.

#### 4. References

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sers%20across%20their%20mobile%20devices.&text=You%20can%20save%20app%20data,when%20the%20devices%20are%20offline. [Accessed: 01-Dec-2021].

Welcome the Weather site!



Sign in to your account

Username \*

Password \*  [Forgot](#)

Password? [Reset your password](#)

No account? [Create account](#)

Sign in

Welcome the Weather site!



Hello, mike  
Sign out

Welcome the Weather site!



Create a new account

Username

Mike

Password \*

••••••••

Email \*

kunalvwadhwa@gmail.com

Phone Number \*

USA (+1)

8073551865

Have an account? Sign in

Sign Up

Welcome the Weather site!



Hello  
6:30:25 PM  
What is your name ?  
6:30:26 PM  
Hitesh  
6:30:30 PM  
Hi Hitesh! How may I help you ?  
6:30:30 PM  
What is the weather today  
6:30:54 PM  
Sure , Which city?  
6:30:54 PM  
london  
6:30:59 PM  
The temperature is 11.02C and Humidity is 83% and light rain is expected.  
6:30:59 PM  
how is the weather Delaware  
6:31:25 PM

Welcome the Weather site!



Hi

⌚35:01 PM

Sorry, can you please repeat that?

⌚35:01 PM

Hi

⌚35:07 PM

What is your name ?

⌚35:07 PM

Kunal

⌚35:14 PM

Hi Kunal! How may I help you ?

⌚35:14 PM

How is the weather In Mumbai

⌚35:25 PM

The temperature is 26.99C and Humidity is 54% and

⌚35:25 PM

Type a message

Web Inspector — localhost — home

Elements Console Sources Network Timelines Storage Gr

Filter Full URL All Document CSS Image Font JS XHR Other Group Media Requests

Name	Domain	Type	Transfer Size	Tim
home	localhost	document	—	—
styles.js	localhost	js	—	—
polyfills.js	localhost	js	—	—
main.js	localhost	js	—	—
runtime.js	localhost	js	—	—
vendor.js	http://localhost:4200/main.js	js	—	—
5204457439_c8dd299265_o.jpg	www.nps.gov	jpg	—	—
websocket	localhost	socket	127 B	0.05ms
websocket	localhost	socket	127 B	0.04ms
websocket	localhost	socket	127 B	0.03ms
websocket	localhost	socket	127 B	0.03ms

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