

Overview of Project

Progress Presentation-II

Onkar J.
Sathe
Rohit G.
Team: Rath

Omkar
Manjrekar
Men-Vikrant
tors: Fernandes
Deepa
Avudiap-
pan

Overview of Project

Overview of Task

Tasks
Accomplished

Challenges Faced

Future Plans

Thank You

eYISA:

■ Objective

- 1 Building a NLP based assistant to access eYantra IOT platform through text and voice control over the Web portal and through Google Assistant!
- 2 Developing flexible block based GUI for IFTTT rules as an alternative to conventional ways of writing rules using code/SQL.

■ Deliverables

- 1 The assistant should at least be able to perform all the frequent queries that take place on IoT platform.
- 2 User should see device data in the chat interface itself.
- 3 A web chatbot interface to be integrated with IoT Platform
- 4 Validations of IFTTT rules with minimization of Lambda functions.
- 5 Final application should show CRON rules being implemented for irrigation.

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Task.no	Task	Deadline
1	Understanding e-Yantra IoT Platform and its APIs	2 days
2	Getting familiar with Dialogflow and required programming languages	3 days
3	Gathering phrases to train the agent.	3 days
4	Adding entities and intents	3 days
5	Take actions on the output of phrases returned by API properly and ask for missing information if any	2 day
6	Testing this and the speech interface and retraining on more examples if required.	3 days

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Task.no	Task	Deadline
7	Develop a proper web interface to be integrable with IoT platform designing throughout the website.	2 days
8	Integration with E-Yantra platform and a demo application	1 day
9	Learning VueJs and component designing	4 day
10	Designing algorithm for converting UI bloks to lambda code with loose coupling	4 days
11	Testing and improving efficiency	1 days
12	Documentation	2 days

What we have done so far...

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- Understanding eYantra IoT Platform & its APIs, DialogFlow and AWS-IoT
- Teaching the assistant to talk & listen and Webhook in JavaScript
- Integrating the IoT assistant with Google Assistant
- Implemented secure OAuth2 token authentication
- Successfully handled ESP-DHT through assistant (accessing sensor data and changing the LED state)

What we have done so far...

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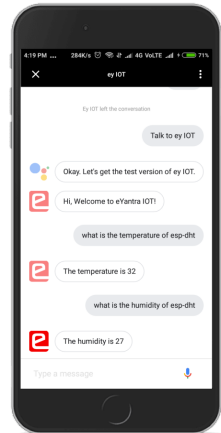
Future Plans

Thank You

- Integrating the assistant in IoT platform's website with chatbot UI

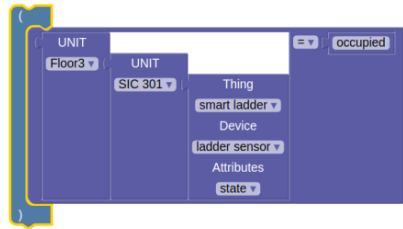
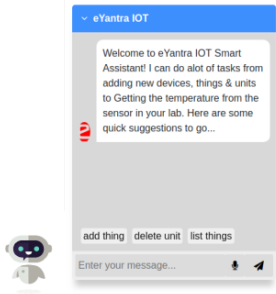
- Making the assistant dynamic enough to handle variety of devices & sensors with their properties

- Assistant can handle other complex commands on IoT platform like Crons from natural language.



What we have done so far...

- Learning about Blockly and it's alternatives
- Creating block based GUI for IF-This-Then-That Rules on IoT platform and converting them to JSON for validation



Challenges faced and How we solved them...

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- Making the assistant to be able to handle variety of devices and sensors
- Converting normal english phrases to Cron Expressions
 - After looking at all the available libraries we decided to build our own JavaScript Library (natural-cron.js)

Future Plans

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- Adding confirmation dialogs to assistant
- Completing remaining Blockly GUI with save & restore features and integrating it with iot-platform
- Validating and converting generated JSON to valid JavaScript code for AWS Lambda
- Testing assistant, crons and blockly and keep improving the efficiency
- Well commented code & documentation

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