

Dr. Watson

Social Media Sentiment/Personality Analysis

<https://github.com/martialblog/watson-diary>



Wanted Features

- Various Input Sources
 - Social Media
 - Chats/Emails
 - Direct Messages to Dr. Watson
 - Dr. Watson Chatbot
 - Images (Instagram)
- Automated Narrative Text from Input
 - Including maybe Images
 - Day by Day format
- Sentiment/Personality Analysis
 - Day by Day Tracking



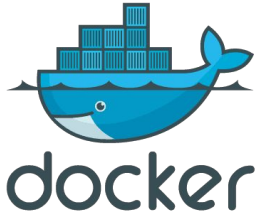
Actual Features

- Various Input Sources
 - Social Media
 - Chats/Emails
 - ~~Direct Messages to Dr. Watson~~
 - Dr. Watson Chatbot
 - ~~Images (Instagram)~~
- ~~Automated Narrative Text from Input~~
 - ~~Including maybe Images~~
 - ~~Day by Day format~~
- Sentiment/Personality Analysis
 - Day by Day Tracking
 - Overall Overview
 - Personality Traits Description

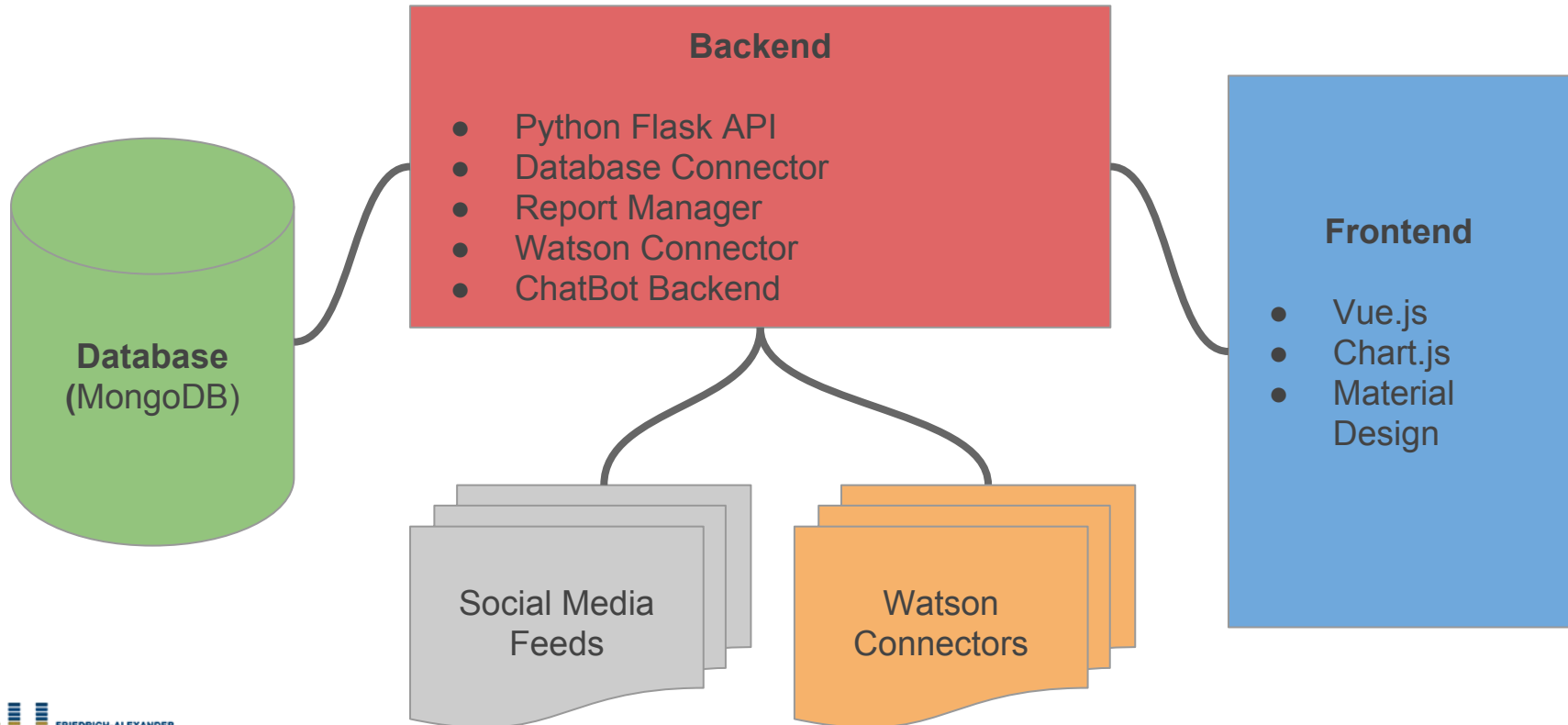


Technology Stack

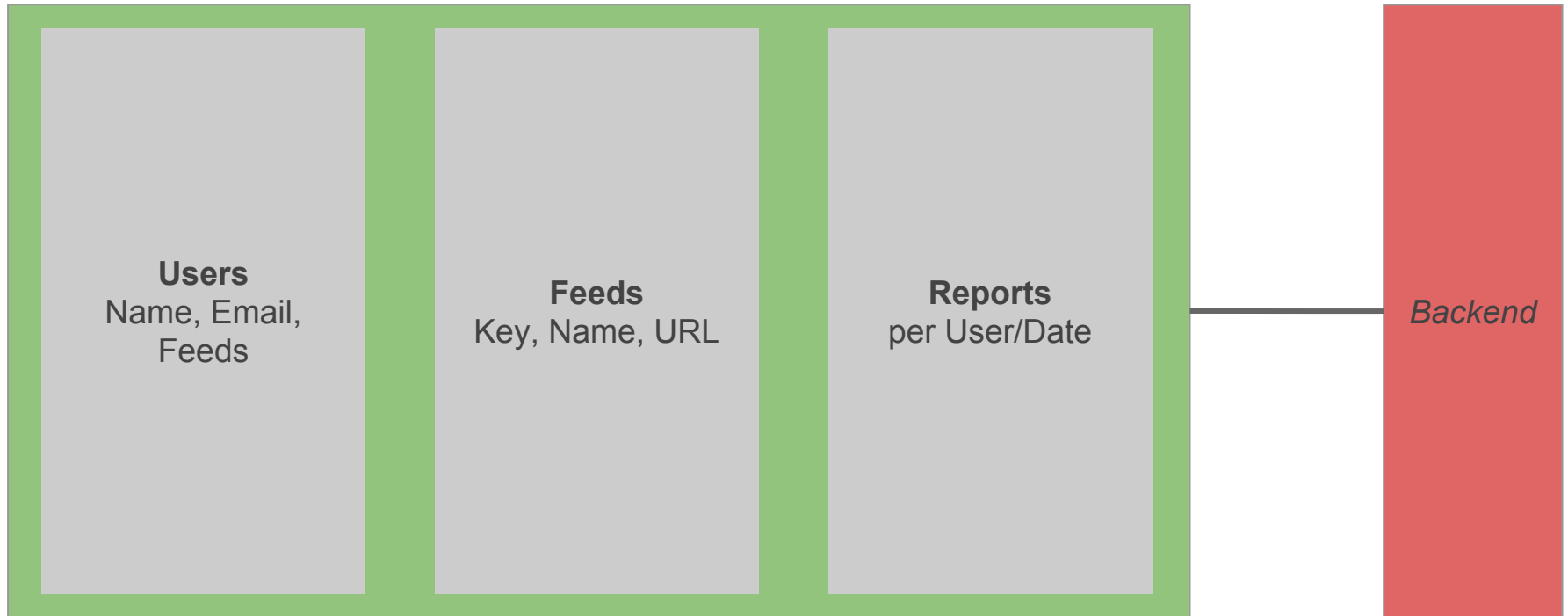
- Python API with Flask
 - Watson Connection
 - Database Management (mongoDB)
- JavaScript Frontend with Vue.js
 - Material Design, Chart.js Plugin
- Docker Container for Development/Deployment



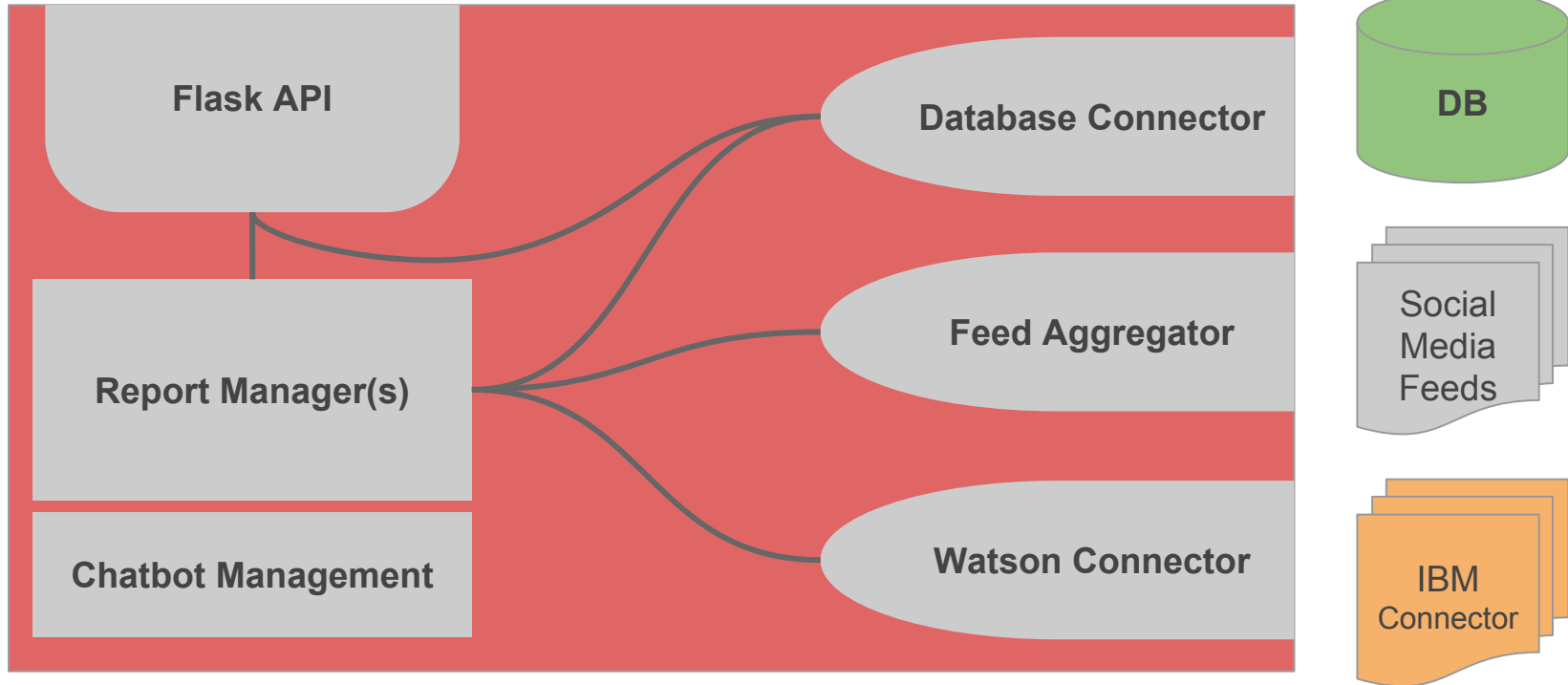
Overview



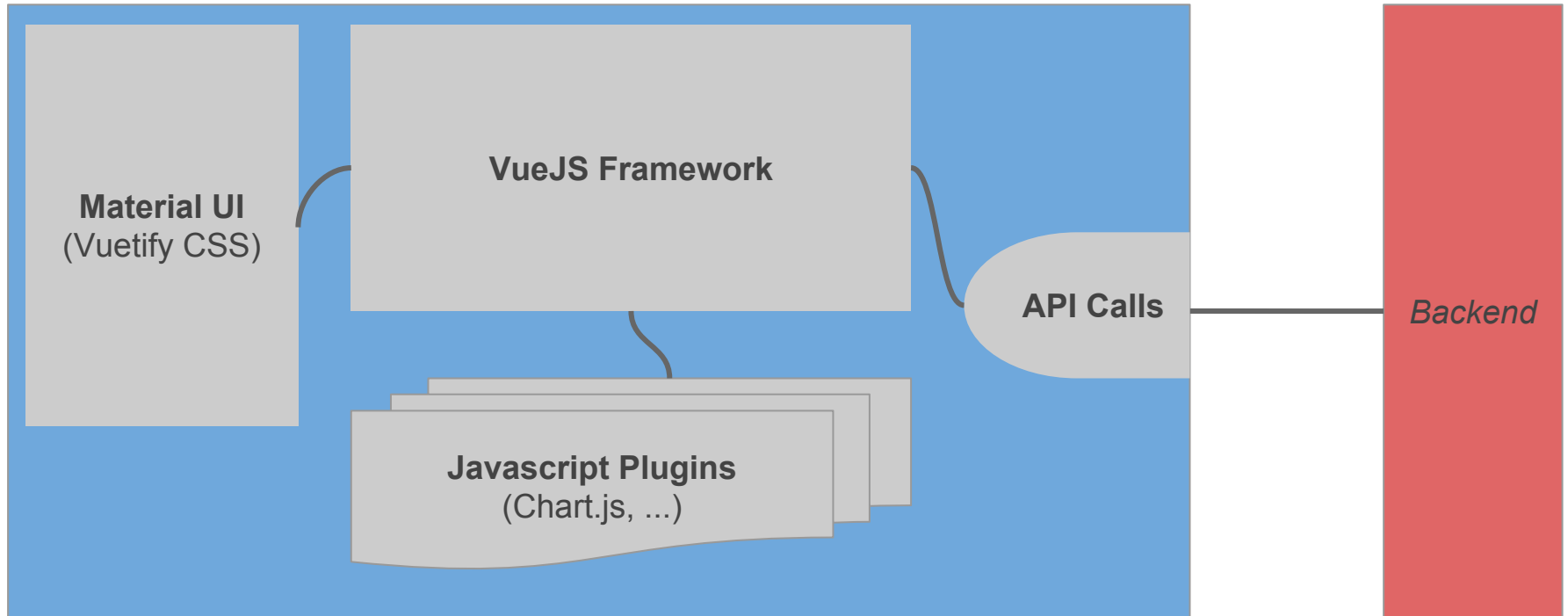
Data Storage



Overview Backend



Overview Front End



Testdata

Criteria

- .json file
- Correct syntax of the text genre
 - Mail
 - Facebook
 - Instagram
 - Sms
 - Twitter
- Correct dates (e.g. feb 30th is not possible)
- Correct time formats (24h/day, 60 min/hours, etc.)
- Python script for automation

Testdata

Short demonstration:

- coding overview
- processing data

Personality Insights API

Text from a single author is analyzed for his personality.

- Big 5 characteristics (Conscientiousness -> Achievement-striving)
- Needs
- Values

Results are percentiles compared to a sample population.

Personality feedback in product

```
▶ (6) [Object, Object, Object, Object, Object, Object] Profile.vue?7841:140
▶ Object {facet_altruism: 0.18808996307476644, facet_cooperation: 0.8196553574932122, facet_modesty: Profile.vue?7841:148
  0.7978329517651483, facet_morality: 0.8426688267921825, facet_sympathy: 0.337001900662529_}
▶ (6) ["You are more concerned with taking care of yourself than taking time for others.", "You are easy to Profile.vue?7841:151
  please and try to avoid confrontation.", "You are uncomfortable being the center of attention.", "You think
  it is wrong to take advantage of others to get ahead.", "You think people should generally rely more on
  themselves than on others.", "You are wary of other peoples intentions and do not trust easily."]
> |
```

- We display outliers in the author's personality
- Each outlier is explained with a sentence
- Easy to understand

Agreeableness

You are more concerned with taking care of yourself than taking time for others. You are easy to please and try to avoid confrontation. You are uncomfortable being the center of attention. You think it is wrong to take advantage of others to get ahead. You think people should generally rely more on themselves than on others. You are wary of other peoples intentions and do not trust easily.

Extraversion

You appreciate a relaxed pace in life. You prefer to listen than to talk, especially in group settings. You are generally serious and do not joke much. You are a private person and do not let many people in. You have a strong desire to have time to yourself.

Emotional Range

It takes a lot to get you angry. You think quite often about the things you are unhappy about. You feel your desires strongly and are easily tempted by them. You are sensitive about what others might be thinking of you.

Conscientiousness

You are content with your level of accomplishment and do not feel the need to set ambitious goals. You do not make a lot of time for organization in your daily life. You have a hard time sticking with difficult tasks for a long period of time. You frequently doubt your ability to achieve your goals.

Chatbot






- Additional method for getting information
- Asks predefined questions or listens to user
- Divides user input in categories
 - Emotion
 - Weather
 - Activities
- Categories expandable
- Output = user input
- Uses Watson Conversation API
 - Intents = categories
 - Dialog system

Hello. Should I ask or listen?

listen

Ok. I will listen to you. What do you want to talk about?

Intents Overview

Intents		
Intents	Entities	Dialog
Create new   Import  Export  Delete 7 intents Sort by: Newest 		
> #weather	sunny	18
> #hello	hi	4
> #emotion	i'm fine	18
> #activities	shopping	20
> #listen	listen	5
> #ask	ask	3
> #goodbye	i'm finish	6

Chatbot - Dialog Overview

The screenshot displays a chatbot dialog editor interface. At the top, there are tabs for "Intents", "Entities", and "Dialog". Below the tabs are two buttons: "Add node" and "Add child node".

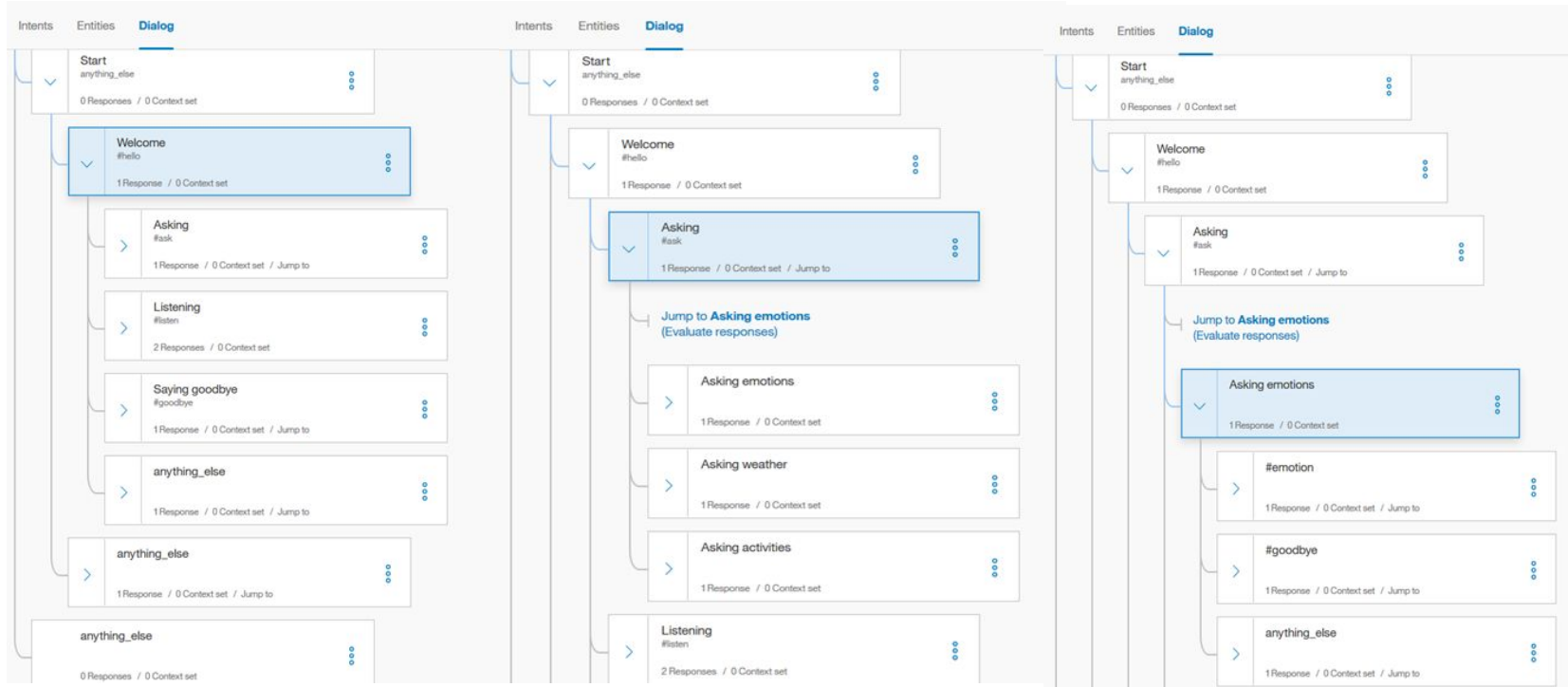
The main area shows a dialog flowchart for a test named "Test1". The flow starts with a "Start" node (anything_else) with 0 Responses and 0 Context set. This node branches into two paths:

- A path leading to a "Welcome" node (hello) with 1 Response and 0 Context set.
- A path leading to an "anything_else" node with 1 Response, 0 Context set, and a "Jump to" option.

On the right side, there are configuration panels:

- A "Start" panel with a "Customize" button and a close icon.
- An "If bot recognizes:" panel with the text "anything_else" and minus/plus icons.
- A "Then respond with:" panel with an "Add response condition" button and a vertical ellipsis menu.
- A text input field labeled "Enter a response...".
- A dashed box with the text "Add another response".
- An "And then" panel with a dropdown menu currently set to "Wait for user input".

Chatbot - Dialog Overview



DEMO TIME

