Incremental and Regression Testing

Web Chat Client with Chatbot

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Team 8

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Components

UI - Application runs in a browser and uses HTML and CSS to display the user interface. Text from on screen is processed and sent to different components using Javascript and Sockets.

UI Input - addMessage() - Adds Responses from other users

notifyMe() - Notifies user when tagged

UI Output - sendMessage() - Sends message to Server Runtime

setName() - Tells server which user is sending messages

Server Runtime - Using Node.js, the server receives the input over socket io from the frontend and determines where the input should be processed as well as sending information back to the UI.

Server Input - getMsg() - Gets messages from the UI

getRooms() - Gets data about the message rooms.

Server Output - io.sockets.on - Strings and Requests from the UI, messages and requests for signing up, number of users in a room, user names, etc.

webhook() - communicates with the API to get ML data and Natural Language parsing from separate service running on a python server on heroku.

Natural Language Parser- The server calls API.AI to parse messages and determine what the correct response should be. The correct function is called from the machine learning module over API.AI sdk.

NLP Input - UI sends messages to server.

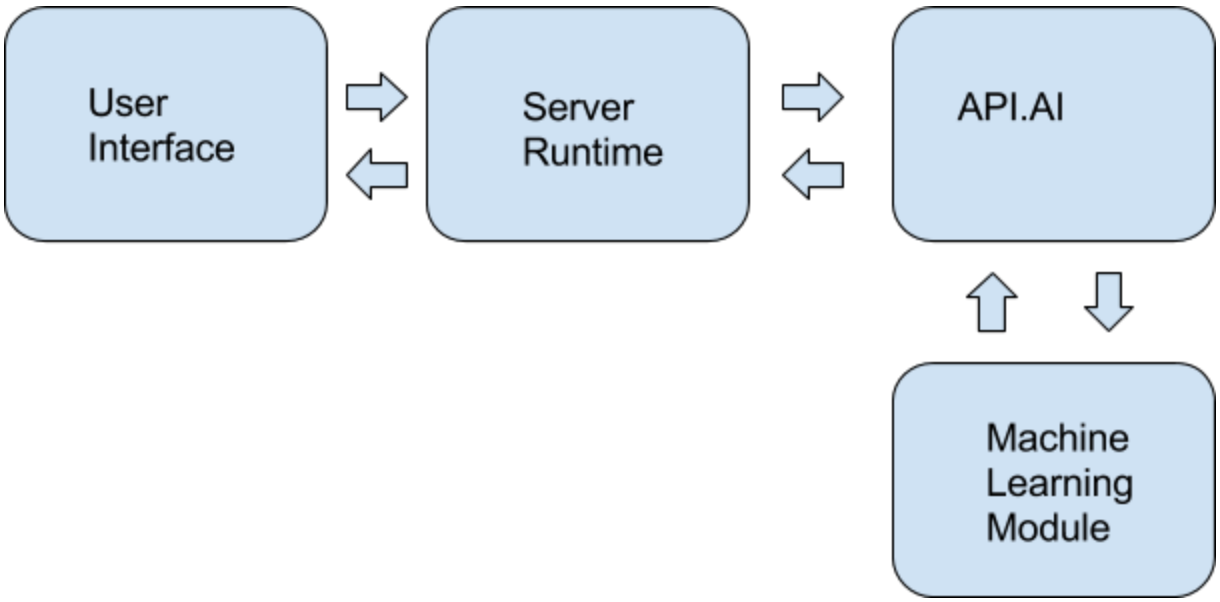
NLP Output - Server invokes code in text_request.js to call upon API.AI for language parsing.

Machine Learning Module - Processes stock data and outputs stock metrics that the user can view in the UI. This is done by use of hosted python server on heroku.

MLM Input - Request from python script app.py

MLM Output - Response back to Server.

- Diagram of Application -



Incremental and Regression Testing Log

- For our Incremental Testing we used a Bottom-up approach, testing each basic component first and working our way up.

Defect #	Description	Severity	How Corrected
1	When two stock names are mentioned in one message to the bot it gets confused and doesn't know which one to answer.	2	We decided to use the first stock name as the dominant stock and provide data about that.
2	Send button needs a double click for it to work.	2	Variable wasn't being reset after each message was sent.
3	Username with special character is not accepted.	3	Encryption was causing this problem, decided to leave username unencrypted or use a different encryption.
4	Vague request about the stock are not replied to.	3	Bot is given a default string which it can use as a reference to answer to such requests.
5	Adding more than three people to the chat room makes the room crash.	1	We were using a static database to store people online at the moment. Used static database instead.
6	Logout button won't respond when clicked.	1	The logout function wasn't working right. Fixed the routine.
7	Tagging the bot won't make it active and listening.	1	The bot api request url wasn't responding.
8	Message box is really narrow and messes up the visibility of the message.	2	Made the box a bit broader.
9	Resizing the screen causes some unintended consequences.	3	Redesigning the layout of elements in the UI.

Regression Testing

Defect #	Description	Severity	How Corrected
101	When user enters two stock names, and he was wanting to know about the second one more.	2	Stockbot answers about both the stock names.
106	Changing the logout method routine, stopped the check box confirming the user wishes to logout disappear.	3	Added a different condition making the pop up box appear.
104	Bot would reply a message with the vague string even though the message was a sensible message, seeking information.	1	The threshold for considering a message vague, was lowered.
108	When the message box was broadened to make the user message appear, it caused the number of online users to disappear.	2	Moving the num of online users bar a bit lower to where it was fixed the problem.
105	Fixing the room to allow 3 user join crashed the whole room.	1	Had to add second user to the room in a different way considering that the data structure was changed.