AIDERA

Team 2: Arjun Bagla, Abhijit Edlabadkar, Rajalakshmy Iyer,
Eehita Parameswaran, Aakash Ranga, Akanksha Tripathy

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Updated Product Backlog

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1   Problem Statement

Individuals use innumerable applications everyday. Integration of essential applications in a simple chat service would be a useful tool for many. We intend to build **Aidera**, a Facebook Messenger bot that helps people access different services in one window. Using Natural Language Processing, Aidera pushes the bounds of creativity and the hope is to provide a seamless conversation for the user with the bot. Our bot uniquely provides an aggregation of different applications by giving users access to their favourite services through a portal. Thus, the bot will serve as an everyday companion to enhance the user experience.

2   Background Information

- There are several service aggregator chat bots that exist. For instance, Google Home has doubled up to be a personal assistant keeping the user informed about news, weather and other Google related features. Even Alexa has similar functionality with Amazon. More specifically, these bots integrate only features available through a single platform.

- Accessing multiple applications for different functionality on a daily basis is tedious for users. Using various services like Yelp, Airbnb on different portals increases memory usage on the individual's device and incurs a toll on battery life.

- Our chatbot will allow Facebook Messenger users to access these different resources through one window. Thus, avoiding the need to create several accounts with different services or even download their standalone applications.

- Aidera is different than it's competition since it provides a unique compilation of amenities for users. Our chatbot further incorporates a simple interface to communicate with people, making the experience more personal and realistic to the user. Also, since Aidera uses Messenger, it is platform independent.

3   Environment

The Messenger platform by Facebook works as a tool to facilitate complex conversational experiences. This enables our team to create conversational bots that can automatically chat with users. We intend to use a Natual Language Processing API like Recast.ai that effectively turns natural language into structured data as a simple way to manage context and drive conversations based on our users intent. A large number of modules are required for the problem we are trying to address and Javascript is very well suited for this purpose. We intend to leverage Node Package Manager and hence, use a Node.js service that provides a functional backend to merge multiple platforms in a single window. A NoSQL database like MongoDB works perfectly to suit our needs as it stores the information the bot requires from the user to process requests to the connected services. Additionally, the database helps with context management and facilitates smooth conversation between the bot with the user. All the environments we plan to utilize have comprehensive documentation allowing for further development.

4 Updated Product Backlog

4.1 Functional Requirements

4.1.1 As a User:

Backlog ID	Functional Requirement	Time(Hrs)	Status
1	As a first-time user, I would like the bot to introduce itself and provide me a set of instructions.	15	Completed in sprint 1
2	As a user, I would like the bot to exchange pleasantries with me.	5	Completed in sprint 1
3	As a user, I would like to interact with the bot.	5	Completed in sprint 1
4	As a first-time user, I would like the bot to repeat instructions when asking for help.	3	Planned for sprint 2
5	As a user, I would like to facilitate a forum-like environment on our Facebook page.	1	Completed in sprint 1
6	As a user, I want to log-in to Facebook to use Aidera.	1	Completed in sprint 1
7	As a user, I want the bot to be platform-independent.	1	Completed in sprint 1
8	As a user, I expect the bot to act in character even when asked about something that the bot does not yet understand.	6	Planned for sprint 2
9	As a user, I would like to keep the settings and a log of all messages across the conversation.	6	Planned for sprint 2
10	As a first-time user, I would like to have a tutorial on how the bot works.	6	Completed in sprint 1
11	As a user, I would like the bot to reply quickly.	8	Planned for sprint 2
12	As a user, I expect the bot to inform me about server downtime.	4	Planned for sprint 2
13	As a user, I would like to get a recommended cuisine each month.	6	Planned for sprint 2
14	As a user, I would like the bot to provide restaurants based on type of cuisine I want to eat.	4	Completed in sprint 1

Backlog ID	Functional Requirement	Time(Hrs)	Status
15	As a user, I would like the bot to provide restaurants based on my current vicinity.	4	Completed in sprint 1
16	As a user, I would like the bot to provide public ratings and reviews of the restaurants.	4	Completed in sprint 1
17	As a user, I would like the bot to provide restaurants based on a price range I can afford.	5	Completed in sprint 1
18	As a user, I would like the bot to provide a PDF of the menu card of a specific restaurant.	4	Completed in sprint 1
19	As a user, I would like the bot to provide information about restaurants such as reservations, delivery or a take out of food, contact number and picture of a restaurant.	5	Completed in sprint 1
20	As a user, I would like the bot to provide a list of available accommodations based on preferable dates.	5	Planned for sprint 2
21	As a user, I would like the bot to provide public ratings and reviews of a particular listing.	5	Planned for sprint 2
22	As a user, I would like the bot to provide a list of available accommodations based on preferable locations.	5	Planned for sprint 2
23	As a user, I would like the bot to provide a list of available accommodations from a specific host.	5	Planned for sprint 2
24	As a user, I would like the bot to provide information for a specific listing.	5	Planned for sprint 2
	Total	**118**	

4.1.2 As a Developer:

Backlog ID	Functional Requirement	Time(Hrs)	Status
1	As a developer, I expect my bot design to allow bot-to-bot interactions.	8	Planned for sprint 2
2	As a developer, I would like to come up with regular updates to the chat-bot. Updates that include giving more relevant information based on user feedback.	8	Planned for sprint 2
3	As a developer, I would like my bot to handle at least 100 users at once.	10	Completed in sprint 1
4	As a developer, I would reduce the downtime for maintenance to 2 hours per month.	5	Planned for sprint 2
5	As a developer, I would like to be able to handle the UI for mobile and web appropriately.	2	Completed in sprint 1
6	As a developer, I would like to implement further fixes and enhancements according to the usage of the user.	8	Planned for sprint 2
	Total	**41**	

4.2 Non-Functional Requirements:

Backlog ID	Functional Requirement	Time(Hrs)	Status
1	As a user of the chat-bot, I expect my information to be secure from other users.	3	Planned for sprint 2
2	As a developer, I expect the chat-bot to be scalable. The performance shouldn't be affected with increasing user base.	10	Planned for sprint 2
3	As a developer, I would like the model wrapper build around the Yelp and Airbnb API's to be reusable and extensible.	15	In Progress: moved to sprint 2
4	As a developer, I would like to securely store user usage and telemetry for further understanding of user requirements without storing user credentials.	15	Planned for sprint 2
5	Build a database that is computationally cheaper to run and maintain.	15	Completed in sprint 1
	Total	**58**	