openFDA – A site for open data research

Links:

Prototype Github Code Repo: <https://github.com/shyamrock/openFDAWebApp>

Prototype URL: <http://104.236.11.72/#/dashboard/overview>

Approach for Pool Two – Developer Pool

The following documents our development approach once we initiated resources to create our prototype. We are following the U.S. Digital Service Playbook for the following documentation:

Product owner and lead - Vishal Maheshwari

Additional Project Members:

|  |  |
| --- | --- |
| Technical Architect | Shyam Nagarajan |
| Front End Developer | Depak Sabu |
| Dev Ops Engineer | Nabil Soulane |
| Backend Developer | Vimal Kovath |

Our Technology Stack/Framework

Development technology:

|  |  |
| --- | --- |
| Agile Methodology Management | Redmine |
| Testing Framework | Protractor, Mocha, Chai, Jasmine |
| Development IDE | Sublime Text 3 |

The above resources for development technology are all open source and freely available.

Runtime Technology:

|  |  |
| --- | --- |
| Frontend | HTML 5, CSS3, Angular JS |
| Backend | Node JS, Sails JS |
| Database | Reddis for Session Store, Mongo DB |

We used Digital Ocean IaaS to deploy our code.

We split this project into two sprints. Redmine was used to implement our Agile development approach. All development was done iteratively as per scrum practice. Here’s a link to the product backlog and scrum meeting notes. Sprint daily meetings and Sprint retrospectives were both employed to identify issues (bugs, to do items, etc.) with the technology build. These issues were captured in the Redmine management system and then closed by our team.

We used Jenkins CI for the continuous integration and continuous deployment of the GitHub code files. Additionally, a GitHub plugin for Jenkins CI and the web hook component of GitHub was deployed to automate the build directly from GitHub. Here is a link to the document that explains our CI and CD approach. Digital Ocean IaaS was also used as the server platform to host the CI server.

For source control management, we used GitHub repository.

Docker was used as the container for the openFDA prototype. Here is the link to the Docker file located on the Docker hub. For more details about the Docker deployment, please refer to this link.

Assuming Docker is installed in your machine, the following commands will run the

application :

docker pull shyamos/openfda\_node\_webapp

docker run d p 80:1337 shyamos/openfda\_node\_webapp sails lift

We continuously monitored the deployment infrastructure using our Nagious Monitoring Server (open source server) which also runs on the Digital Ocean IaaS server. Here is a link showing the results of the monitoring.

This prototype as been designed to be easily deployed on any other servers or local machines. This assumes that node.js is and Git is installed. Here are the detailed steps.

Open terminal in Mac or Linux ; Command Line on Windows Systems

1. Install nodejs: <https://nodejs.org/download/>

2. Install Git: <https://git-scm.com/book/en/v2/Getting-Started-Installing-Git>

3. Run “Git clone: <https://github.com/shyamrock/openFDAWebApp.git>”.

4. Cd “openFDAWebApp”.

5. Npm install. Run this command with Sudo on a Mac or in Linux.

6. Run “Sails lift”.

7. Open the app in a browser at <http://localhost:1317>.

Approach for Pool Three – Full Stack Pool

Product owner and lead - Vishal Maheshwari

Additional Project Members:

|  |  |
| --- | --- |
| Technical Architect | Shyam Nagarajan |
| Front End Developer | Depak Sabu |
| Dev Ops Engineer | Nabil Soulane |
| Backend Developer | Vimal Kovath |
| Interaction Designer | Johnson Eyadiel |
| Visual Designer | Martin Mathew |

Define the Site Use:

1. What data would provide the most immediate impact for the researchers.
2. What ways the data should be displayed in order to easily understand the information.

Conclusions:

1. Research data should be pulled for food, device and drug recalls.
2. Data should report across multiple timelines (in years)
3. Researcher should be able to enter word(s), phrase(s) in a search field in order to pull the data of interest
4. Researcher should be able to request data to be displayed as various graphs

Use this link to view the user stories.

Please refer to this link for review of approach to UI and UX with Human Centered Design

Please refer to Approach for Pool Two for project execution.