EconomiCali

(A FiscalNote Prototype)

Kirati Bhuva
Computer Engineering Department
San Jose State University
San Jose, USA
kiratib216@gmail.com

Suhas Nayak
Computer Engineering Department
San Jose State University
San Jose, USA
snsuhasnayak@gmail.com

Spandana Padala
Computer Engineering Department
San Jose State University
San Jose, USA
span.cherish7@gmail.com

Shraddha Jamadade Computer Engineering Department San Jose State University San Jose, USA shraddhatj23@gmail.com

Abstract— EconomiCali provides data services, and news to small and medium organizations through the EconomiCali Government Relationship Management (GRM) service. EconomiCali has reinvented influence — dramatically improving the way organizations gather legal information related to their business. Contextual insights are delivered via elegant workflow that support an enterprise-based approach to modern government affairs.

I. PROBLEM STATEMENT

Government information is not easy to access and there is lot of it. For any business, keeping the information which their business depends on in spreadsheet which are being updated. Traditionally they were looking at around 50+ different websites, Federal websites, take links, PDFs, texts and put them all together into one folder on to their computer. Having a dedicated platform which provides the ability to view all the legal information about their businesses and take decisions accordingly will help organizations proactively grow and protect themselves.

II. INTRODUCTION

Every organization should be in line with the norms and policies of the Government in order to efficiently run their businesses. Handling the legal matters, is one of the major things to take care of when starting a new business, to make sure their intended businesses abide by all the rules and organizations regulations. Many find troublesome to gather legal information related to their business areas as they have to collect lot of information from various government sites, information and discussion forums or from lawyers. 'EconomiCali' solves this problem by maintaining this huge amount of information in one application. This information contains a list of all the bills with its details, corresponding to various categories, in its varied process stages. It also gives information about its creators and other legislative people involved with it.

Thus, the aim of the project is to make all this crucial data available to organizations or budding business individuals in a user friendly, customizable way where they can abstract and view whatever is necessary for them. Thus, this application would be of a great value and remarkable importance to these business

organizations as it will help them get rid of any future legal trouble with ease and without spending much money.

III. PERSONAS

Personas for the application 'EconomiCali' are Government Affairs team members of organizations that want to run a business or continue running their business in the country efficiently.

IV. FEATURES

Bills



The application displays all the bills corresponding each category such as Education, Government, Corporation, Agriculture, Health Care etc. Each has the following fields

- o Bill No
- o Introducer
- o Introduced On
- o Category
- o Title
- Status
- Bill Type

Bill No: It is a unique number corresponding to each Bill given by the Government when a bill is introduced.

Title: Provides a brief description about the bill.

Introducer: It is the person who has introduced the bill.

Introduced On: The date on which the bill was introduced.

Category: This option defines under which category the bills is arranged, for example: Education, Health-Care, Corporation, etc. The user

can select particular category from the drop-down box and view all the bills corresponding to that category.

Status: Determines the status of the bill which can be passed, Failed, Enacted, etc. The select status radio button allows users to view all the bills corresponding to the selected status.

This page also provides the functionality to filter out other categories and keep only those of our interest, thus enabling efficient search. If we want to find a bill which is particularly effective within the issue area of Sports and Recreation, then after applying the scope filter and choosing particular region from the list, we go to the categories tab and mark that we only want to see the effective legislatures within the Sports and Recreation field.

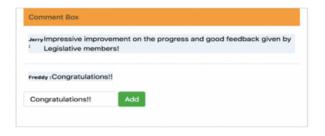
The search bar on the page allows users to provide a bill number to display its respective details. When a user inputs the Bill number in the search, it displays the details of that particular bill.

On clicking a particular bill number link



The user is redirected to a page with more detailed information on that particular bill.

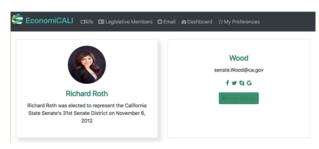
Comments on the Bill



When a user clicks on the Bill no, a complete description of the bill is displayed and user who is the representative of the organization can comment on bills to have collaboration among his colleagues.

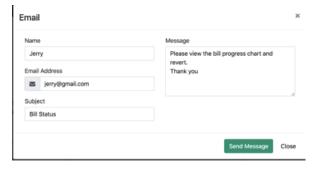
It provides transparency among the members in his team to know the status and the progress on the bill.

Legislative Members



This feature is used to display the list of legislative members, with their profile and their mail ids for the organization to communicate with them to work on the bills

Email Feature

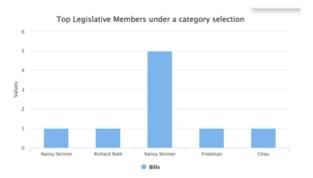


Each user is provided with mail service to communicate with the Senators on the bills

Dashboard

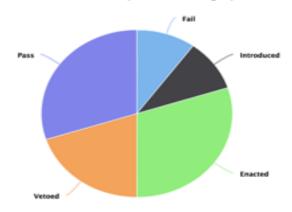


drop-down to select category



Bar graph which shows top 5 legislative members (one who dealt with maximum number of bills) in the category selected by the user.

Bill Status for a particular Category

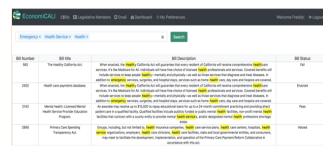


Pie chart which shows status of selected bill in particular category.

Analytics provides the organization to give an insight of the top senators under category who dealt with more no of bills for each category

It also showcases the bill status for each category.

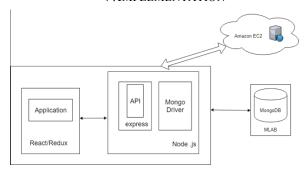
Saved Preference



It allows user to search for keywords, which highlights the text in Yellow from the available bills. It also allows the user to save the selected bills.

User quickly navigate to the corresponding bill that he wants to save and work on them

V.IMPLEMENTATION



A. Web Front-End

We used bootstrap because of its speed of development, responsiveness, consistency, customizability and available community support. We implemented the front-end in ReactJS, and hosted on AWS EC2. ReactJS gave us the easier approach as we built custom components that we could use everywhere in the project. ReactJS renders only changed DOM and its fast in doing that. It also helped us build the project as a single page application.

B. Back-End

We have used Node.JS as server side framework. It runs on a single thread also it is a light weight process. When compared to other server side frameworks Node JS request-response methodology is relatively faster. We have hosted

this on an AWS EC2 instance. Node JS provides a feature rich library that we can use with just importing the required modules not worrying about how they work at backend.

C. Database

We have used MongoDB database as our datasource. We chose MongoDB for two reasons, first MongoDB's document-oriented data model makes it exceptionally easy to add or change fields second it helped us to quickly evolve an application, MongoDB's flexible data model facilitates this. Rather than fitting an application to meet schema requirements.

D. Web Scrapping

We gathered required information needed for our application from California Legislative Information site using Web Scraping which is also known as Screen Scraping, Web Harvesting, Web Data Extraction etc. Using this technique, we extracted huge amount of data from Official California Legislation Information site and saved it in MongoDB. We used cheerio library to scrap the data.

VI. FUTURE ENHANCEMENTS

There are lot of enhancement's possible, such as:

1) The major possible enhancement would beCurrently in our application we have just made an
attempt to help small and medium organizations to
successfully execute their mission and vision. We
can also extend this to Large Organizations and
Multinational Businesses. This can be more
challenging because Large Organizations and
Multinational Businesses will be spread all over
the country and even in different countries as well.
So now we not only need to take care of all the
state regulatory compliances within the country
but also state regulatory compliances of other
countries where the company's branches are
spread.

2) Say the company which has registered with EconomiCali has saved some preferences which are related to their company. In future if there are any changes made to the bills for which the company has registered, we will notify the company via email so that they can take specific action.

As said previously there are lot more enhancements possible.

VII. CONCLUSION

To conclude, we were able to help Small and Medium Organizations to some extent to help solve beautifully complicated intersection of information between Government, Data and Business which is changing rapidly, constantly and inconsistently by aggregating massive government datasets, by seeing critical information more clearly.

VIII. Acknowledgement

Thanks to Prof. Rakesh Ranjan for his devoted guidance. The clarity of his comments and the insights he shared on latest technologies helped us a lot to learn and implement his application which will be very useful for Small and Medium Organizations to successfully execute their organization's mission and vision.

IX. REFERENCES

[1] Official California Legislative Information http://www.leginfo.ca.gov/
[2] Fiscal Note https://fiscalnote.com/