

# STARTUP TRENDS 2018



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## 1. INTRODUCTION

### 1.1 BACKGROUND AND MOTIVATION

As an aspiring entrepreneur, I have always been interested in understanding how individuals create organizations from scratch. Funding and financing play an important role in organization's prosperity. This is the reason I chose to make a visualization that would capture various dimensions of fundraising in the startup ecosystem.

### 1.2 SCOPE

The project focuses primarily on uncovering patterns about what sort of organizations are funded and correlations between market, location, capital and achievement.

### 1.3 AUDIENCE

This report is tailored to the interests of aspiring entrepreneurs, new businesses, investors and curious public.

### 1.4 DATA SOURCE

CrunchBase dataset:

- Organisation.csv – 540,204 rows and 16 columns

- Investments.csv – 168,647 rows and 18 columns

- Acquisitions.csv – 18968 rows and 18 columns

### 1.5 DATA CLEANING

Data cleaning was done using R Scripts.

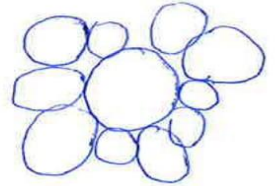
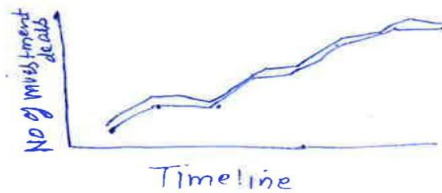
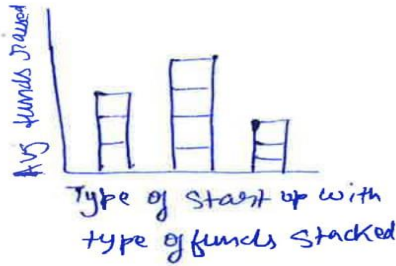
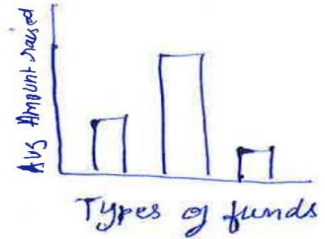
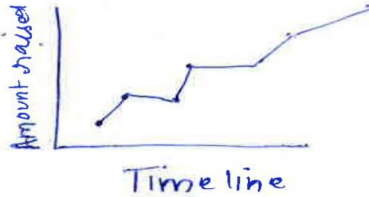
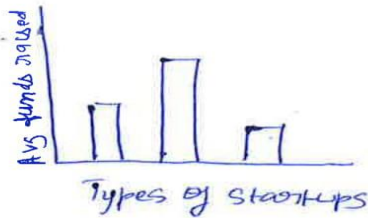
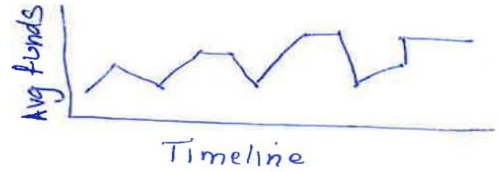
## 2. DESIGN

The five-sheet methodology, which I have incorporated, is present in this section.

## 2.1 SHEET 1

### SHEET - 1

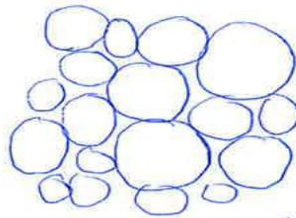
Idea :



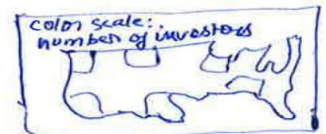
Bubble chart with Avg funds raised by various types of Startups.



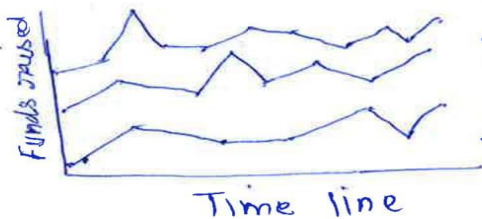
Globe with markers on the cities that hold startups. Sized with respect to the number of startups.



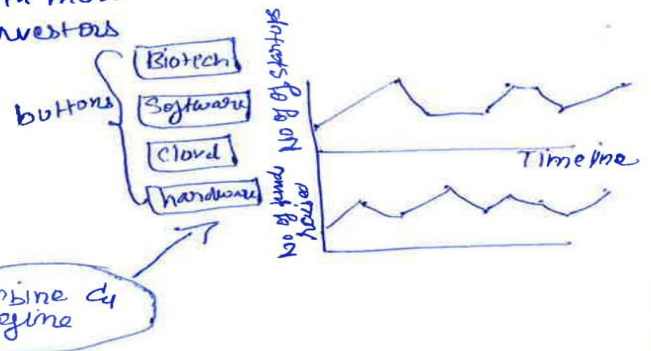
Bubble chart for cities other than California with most number of investors



USA MAP



type of funds

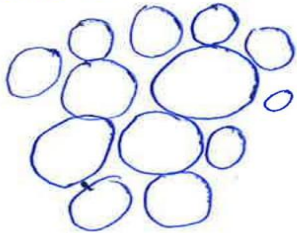




## SHEET-2

Layout

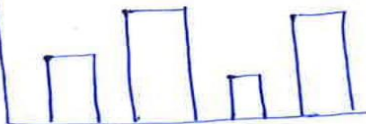
Bubble chart with Avg funds raised by various types of startups



▼ Top 10

Top 20  
Top 30  
Top 40  
Top 50

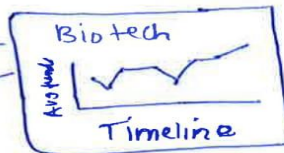
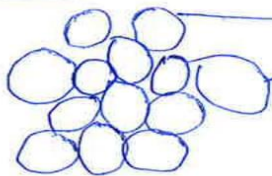
Proportion Bar



Top cities

▼ Top 5 cities

Top 10 cities  
Top 15 cities  
Top 20 cities

Focus

Title : StartUp trends

Author : Abishek

Date : 2/6/2018

Operation

- \* Can choose to display data from various categories using the drop down box.
- \* On click on the bubble pop up a line chart with Avg funds per month

Discussions+ve

- \* Easy to implement
- \* Can share information at a glance

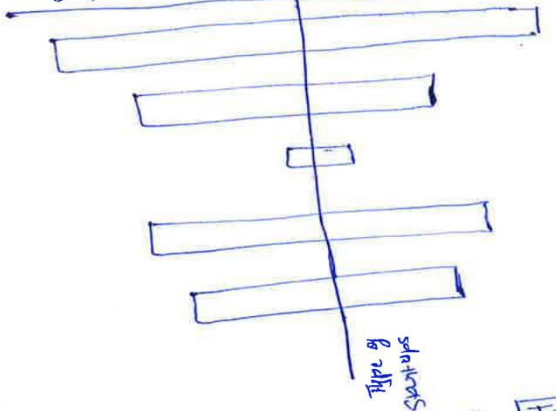
-ve

- \* Does not reveal underlying pattern / relationships.

## SHEET - 3

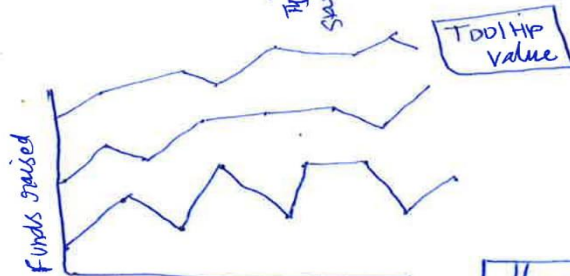
Layout

Avg funds raised | No of Startups



▽ Top 50

Top 10  
Top 15  
Top 20



Types of funds

- ☒ Venture
- ☒ Series A
- ☒ Series B
- ☒ Series C



Title: Startup trend

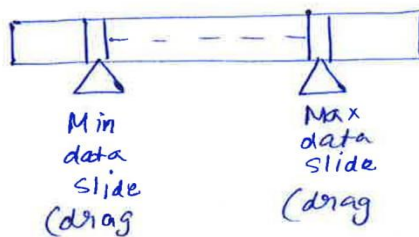
Author: Abishek

Date: 2/6/2018

Operation

\* Can choose to display data from various options  
Top 5, Top 10, Top 15, etc.

\* The data range slides at the bottom is initialised to the entire range but can be to any range.

FocusDiscussion

+ve

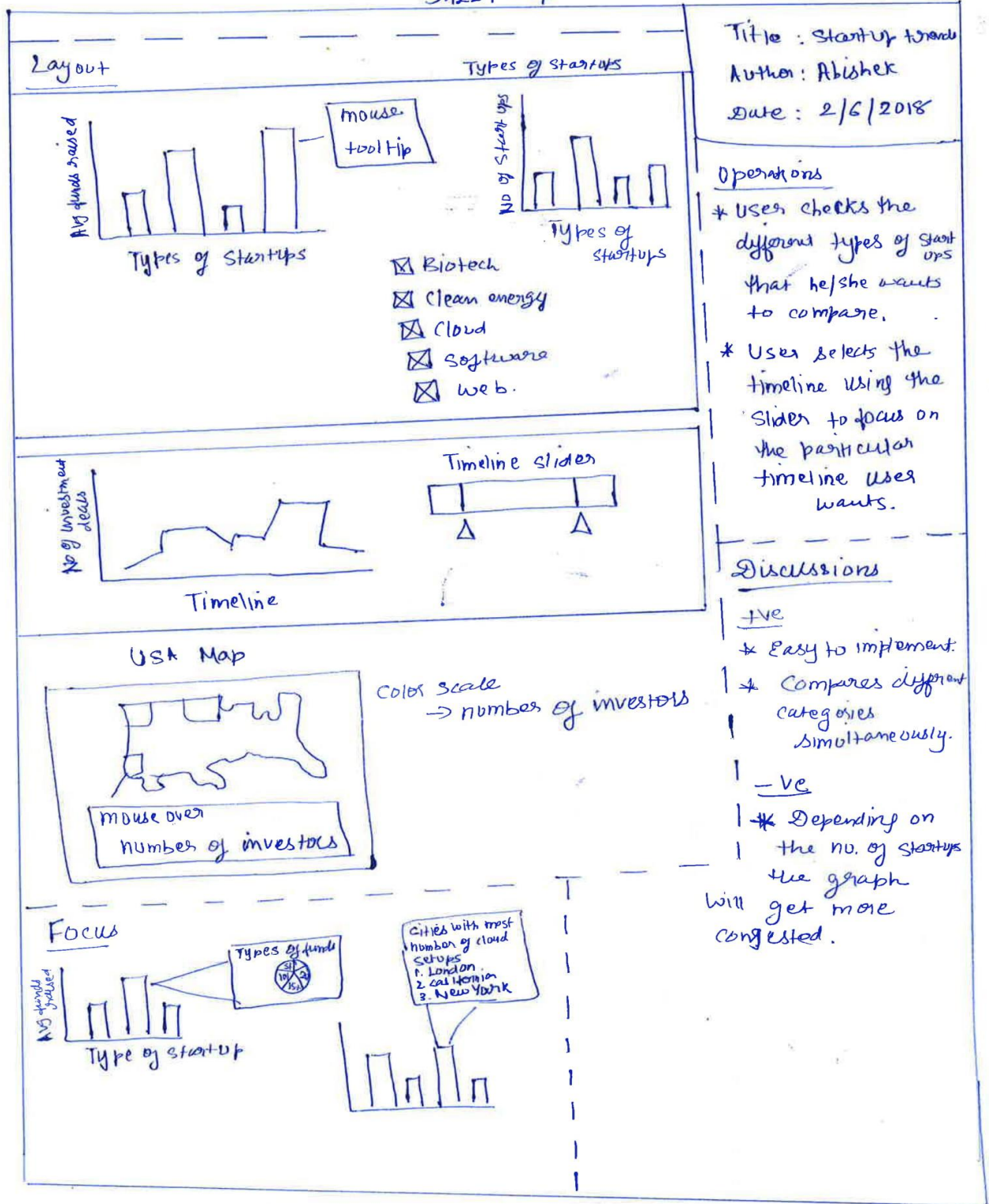
\* Highly interactive

\* Trends in history can be glanced easily.

-ve

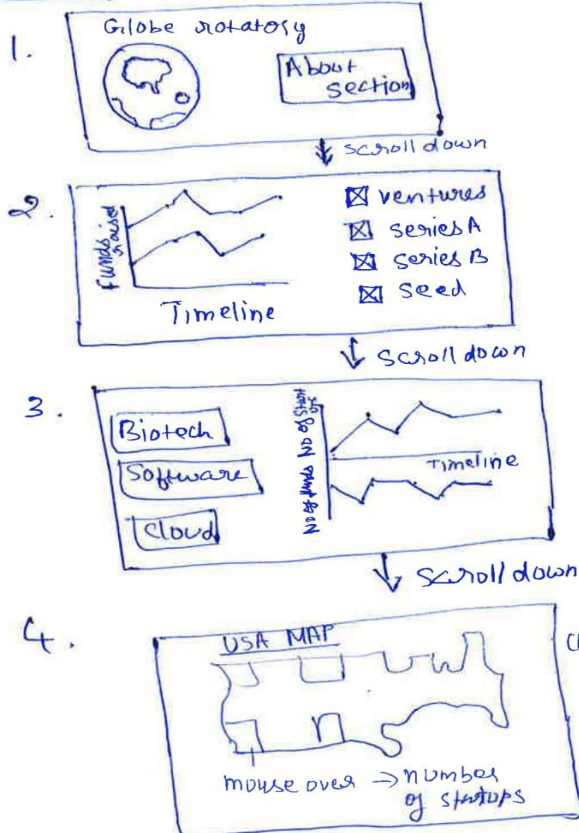
\* Hard to implement

## SHEET - 4





## SHEET - 5

Layout

Title: Startup trends  
Author: Abhishek  
Date: 2/6/2018

Operations

1. Rotating globe with markers on the cities with most number of startups.
2. Stacked area chart with check boxes to select the types of funds.
3. Two Area charts with buttons to select the type of Startup.

Details

- Dependencies:

- \* JAVASCRIPT JS
- \* HTML + CSS

- Time to build:

\* 2 weeks:

- Requirement:

\* to support CSS & JS

- Cost:

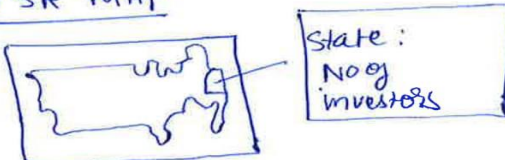
No cost involved.

Focus

Rotating Globe



Glowing markers on cities with most no of startups

USA MAP



- 
- Rotating Globe:

Since this, the first page it is always best to have a visually appealing element to attract audience. The globe is not just attractive but also provides users with the ability to read data with ease.
  - Stacked area chart:

Volume, development, growth with respect to various types of funds are anything but difficult to recognize when exhibited in an area chart. This is why, I have chosen a stacked area chart.
  - Area chart:

Area charts make it simpler to capture growth over time. Therefore, I chose to combine two area charts one for the number of startups and the other for Average funds raised by each industry where buttons are provided to users to navigate through industries.
  - U.S.A Choropleth:

A simple and interactive map appears to be a straightforward solution since the objective is to recognize potential startup hubs other than California. Therefore, I decided that a simple design with an interactive tooltip and colour scale would be a more intuitive approach.

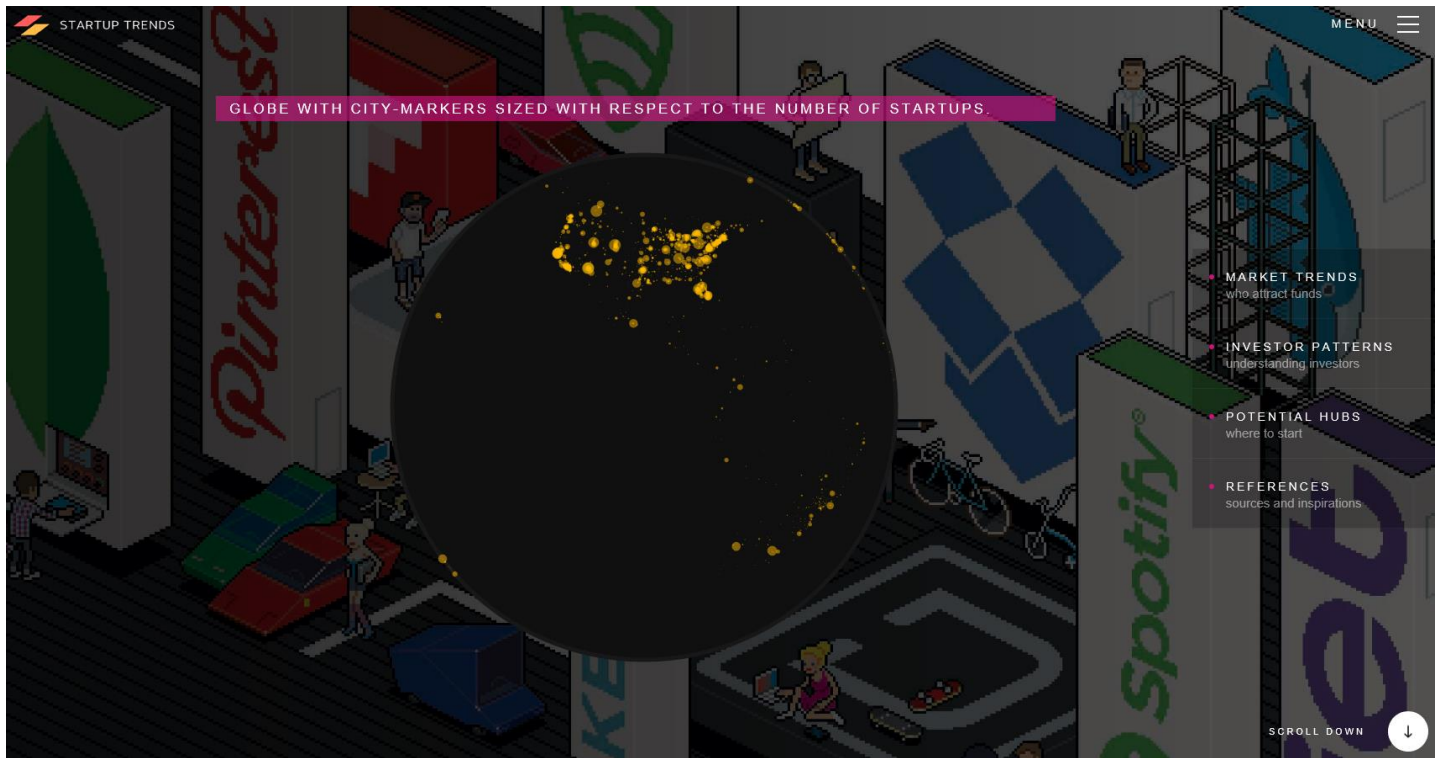
### 3. IMPLEMENTATION

#### Tools and libraries used

- D3.js
- HTML, CSS, JS
- JQuery.js
- Bootstrap.js, Bootstrap.CSS
- Fonts.Google
- Plotly.js

## 4. USER GUIDE MANUAL

### 4.1 HOME SECTION



The picture above is the first section of the web page that user would see when he opens the website. The page has a Rotating globe, which has glowing markers on the city where the markers are sized with respect to the number of startups present in the city.

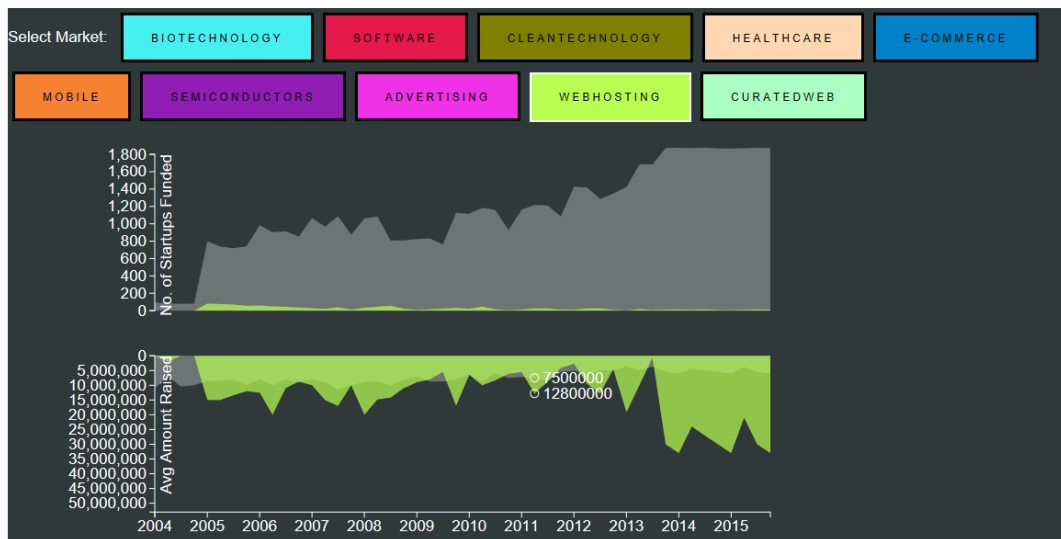
Towards the right, a navigation bar is placed which guides the user to land anywhere the user wants on the web page. The menu option does the same operation as the navigation bar.

There is a white scroll down button towards the bottom right of the screen which will take the user to the next section of the web page. The user can even scroll manually down through the sections.

## 4.2 MARKET TRENDS SECTION

“In the biotech space, that's an all-time high,” said Greg Vlahos, a life science partner at PwC ([biotech-investing-hits-an-all-time-high, 2015](#)).

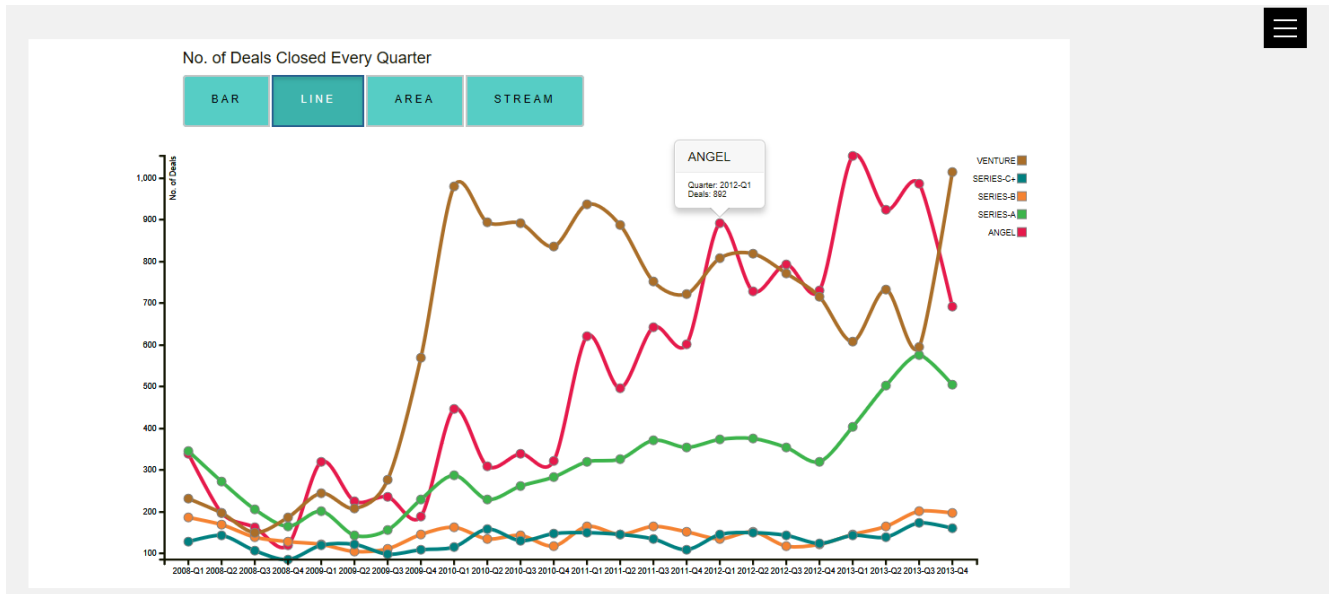
Followed by biotechnology, web hosting industry have started to raise more funds recently.



The screenshot above is the second section of the web page. The page has an area chart and ten buttons which represent the top ten tech startup markets. The user can choose any of the markets from the above list to view the Average amount raised and the Average startups funded of each of the markets against the Average amount raised together by all the markets and number of startups funded inclusive of all markets respectively. Even if the user does not choose any of the markets, the chart would automatically loop through the various markets within a certain interval. Furthermore, there is a visually appealing tooltip providing detailed information attached to all the charts.



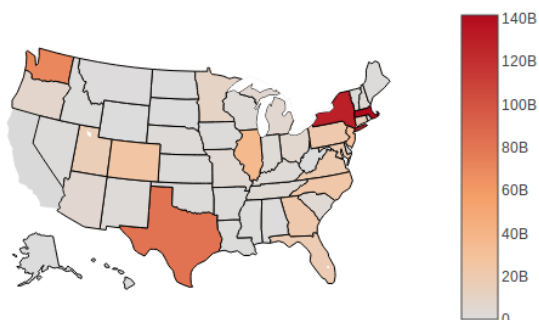
### 4.3 INVESTOR PATTERNS SECTION



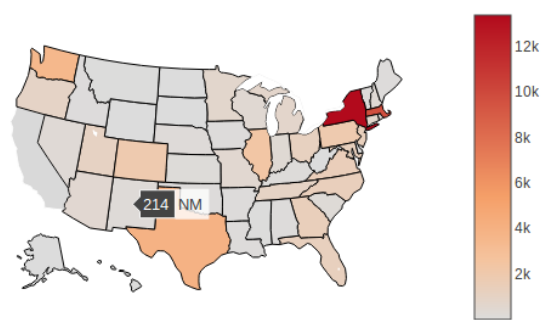
This section consists of four different layouts (Bar, Line, Stream, Area) such that different patterns can be captured more easier in different layouts. This section uncovers investors patterns to answer the question “When Is The Best Time To Raise Funds ?” There are four buttons where the user can choose the layout of his choice and also there is a visually appealing tooltip providing detailed information attached to all the charts.

### 4.4 POTENTIAL STARTUP HUBS SECTION

USA: Total Investments made by State



USA: No. of Investors by State



This section has two U.S.A Choropleth maps representing total investments made by each state and the number of investors present in each state. This simple map has an interactive tooltip providing information about each state on mouse over.

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## 5. CONCLUSION

Based on the exploration:

Investors tend to invest more during the first quarter of the year.

Next to California; New York City and Massachusetts house the most number of investors. Biotechnology and web hosting industries have started experiencing a boom recently.

The project was a challenging one where I had the opportunity to put into together my coding knowledge as well as my designing skills. What I learnt in this unit becomes meaningful when I get a chance to work on a project of my own.