**Startup Funding Analysis Final BI Project Document**

**Team and Data**

Our team consists of four members (Xinyue Jin, Ling Jiang, Shihan Wang, Yiyang Yin). The dataset we used is called Startup Venture Funding from the tableau public website. This dataset is about startup companies, investment, and acquisitions via [Crunchbase](http://www.crunchbase.com/) (total 4 sheets which are Companies, Rounds, Investments, and Acquisition).

**Audience, Objectives and Roles**

Our team focuses on the startups funding projects. There are two main objectives of our project. One is to help investors notice which markets have more potential for investment. The other one is to help startup companies figure out what the current fundraising market looks like and who are their potential investors they could seek funding from. In this way, the startup companies may increase their possibility of getting fundings. Therefore, our intended audience are investors and enterprisers. Xinyue Jin and Ling Jiang concentrate on the first purpose (first and second dashboards for investors part) by using the Companies sheet. Yiyang Yin and Shihan Wang concentrate on the second purpose (third and fourth dashboards for enterprisers) by using Rounds and Investments sheets.

**Audience#1: Investors**

For investors part, we first did data preparation for the Companies sheet. Basically, we select companies located in the United States since we would like to focus on the USA companies. Then, we select the related variables such as market types, total funding amount, and so on. We remove the null values, change some variables’ format, and finally group the similar markets.

In our first dashboard, we use two dynamic mapping graphs showing the funding trend in each state by year based on funding amount and number of companies that got funding. The reason we show this is that we would like to find out which states have better increases. We would like to use these states as examples to analyze the market rankings in the second dashboard. In the second dashboard, we first use pie charts in order to provide specific funding information in each state. We can then use filters to observe the distribution of markets in each specific state. With the proportion of each market in our example states (California and New York), we can figure out which markets have higher proportions in these two states. The similarity of markets in higher proportions can indicate that these markets may be also in top rankings in the whole United States. To check it, we then use the histogram to show which markets are in the top fifteen in the United States, and it ends up with similar results and meets our previous indication. Finally, we can use the dynamic histogram to show the changes in ranks of top 10 markets based on total funding amount. With this graph, we can tell which markets are resistant to investment with time changes and which markets start to be invested a lot in recent years. With all information above, we can finally give investors suggestions about which markets are potential and safe to invest.

**Audience #2: Entrepreneurs**

With entrepreneurs as our audience, we first utilize information from the sheet “Rounds”, which provides detailed information about how much money each company is funded with in each round it went through and when it got it. The business questions that are meant to be addressed here can be: what is the major source for entrepreneurs to seek funding from and what other alternatives are? What is the amount entrepreneurs should expect to raise from each round and whether the VC offering fund is fair? What does the VC industry look like right now and is it now a good/easy time to raise money?

Likewise, we limit our data to include only companies in the United States since market conditions differ across the globe. With respect to time, only data from 2000 to 2014 is included since too long of a time span may not reflect an accurate picture. As we aim to provide the funding expectations for entrepreneurs, we would like to be rigorous and focus on more recent data otherwise the mean derived will likely be gravitated towards abnormal fluctuations in the 1990s’ less mature market. In the bar chart that ranks the total amount raised by funding type(left up corner), we choose to only focus on Pre-IPO funding, meaning we exclude post-ipo equity and debt financing, which are in much larger amounts and less applicable to provide reference for startups companies. The result of the first chart points out VC being the number one funding source for startups, other alternatives including debt and private equity also show popularity while seed, grant and angel investors play less significant roles. This finding prompts us to dive deeper in the VC industry to see if we could dig more valuable information and constructive advice for entrepreneurs seeking funds.

The bar chart in the left down corner suggests a reasonable range entrepreneurs can expect to raise from each round. It gives founders an idea if the company's strategic funding demand is in alignment with the supply and if VC offers are within the industrial average levels. Finally, the line chart on the right depicts the amount raised by funding type across time. We choose to only focus on the trend of VC for various reasons. First, VC is the leading source and also the industry we want to dig deeper as mentioned earlier; second, VC is more institutionalized and mature so the funding is distributed considerably evenly across startups companies compared to other source fundings, meaning there won’t necessarily be several large amounts of transactions standing out to skew the results; third, some funding sources such as angel and seed are highly correlated with VC trend but in a much smaller size. The result suggests currently it may not be a “golden age” for VC but not generally a bad time to raise money.

Ultimately, we analyzed the sheet “Investment” to stand in entrepreneur's shoes and identify the go-to Venture Capitals to maximize the chance to get funded or the dollar value of funding. Living in a golden era of startups, we are not only experiencing the booming of tech startups but the great rise of VC capitals and accelerator programs. The robust VC ecosystem with more capital certainly made the startup more easily to get funded and with larger funding, however, it created new challenges for entrepreneurs in detecting the VC that they should go talk with. This dashboard is designed for entrepreneurs who have a hard time in deciding the VCs they should connect and network. To land the target venture capitals for start-up companies, we analyzed the investors data in 2 following methods: first, we would like to see who are the top investors that invested most companies in the last 15 years. And for those top investors, what types of market are they most likely to invest in? After filtering out the records before 1999 and selecting the records from top 10 markets, we set a condition to pick the investor that has larger than 200 investing records, which returns us those top 5 venture capitals including DFJ, KPCB, New enterprise associates and etc. Clearly, the CEO of a biotechnology start-up should put great efforts on contacting and networking with the Kleiner Perkins Caufield & Byers while the SV Angel is not a smart option to invest too much time. Also, as shown in the size of the pies, the KPCB is the most generous VC as the average investing amount is highest among these top 5 Venture Capitals. In this view, entrepreneurs could find the most fitting investors of their market in a straightforward way. Second, we are interested in figuring out the top VCs for each fundraising round, from round A to round G. Similarly, we extract the record form the same time period as we did in the first part and select those top 5 investors again. In detail, entrepreneurs who are interested in raising Series A funds could contact SV Angel to boost the chance of getting funding; while New Enterprise Associate is the place for them to maximize the dollar amount of funding. With this view, entrepreneurs would land the proper VC relating to the fundraising round.