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Data Proposal

Strategy focused models are often hard to implement as strategic decisions are often a combination of objective data and subjective opinions and experiences that factor in to a final decision that is made. There will always be a level of ambiguity when it comes to strategic decision but we aim to use data to make sense of the ambiguity and help optimize decision making process by speeding up decision process and accuracy of decision predictions.

Key Questions to answer:

* How should decisions be made objectively without bias in high-stakes decisions?
* How should decision makers and their respective proposed actions be weighed relative to their historic performance and network relationships?
* What are key decisions, characteristics, etc. of people themselves that directly affect decision outcomes?

Our approach to solve this problem is to focus on structural modeling and creating simulated data that can help answer the above questions. Data will focus primarily individuals and their networks, scraped from linkedin, facebook, twitter. Ultimately we will test our model on CNTRD LLC’s client data. CNTRD has worked with many companies to enhance company structure, thus providing unique insights on characteristic features of the individuals who make up a company. Building a model based on CNTRD’s client data only will likely be somewhat biased and thus we also intend to validate our model with CNTRD data and aim to simulate or scrape the majority of our data from labor databases/websites to build our primary model.

As our project will require more domain knowledge to create a hybrid structural and data model we plan to study extensively on existing literature and research in change management and strategy design, and will incorporate current findings into our own analysis.

The techniques we will likely use to answer this question will require significant hypothesis testing in order to test the effects of various features and the values of various parameters such as the effect of a CEO’s personality on a company’s direction. In order to optimize various key features such as profit, employer satisfaction, optimization tools learned/reviewed in Volume 2 will be utilized for our personal findings. To simulate data, the use of partial differential equations from Volume 4 will be used, as well as simulating variance/change over time with our data/model.

To understand how strong our answers are, we will need to incorporate a sense of domain knowledge. That being said, some general metrics will be profitability, cost, number of employees at different rank levels, employee satisfaction, and growth. Depending on the dataset, however, these metrics could have different meanings and different correlations towards the industry.

The work will be divided amongst the team members according to the respective strengths that we each have. Sam will be in charge of understanding the metrics and validity of the tests, Joseph will use his data engineering capabilities to clean and access the data, and Gabe will work largely with creating tests to measure different parameters. Much of the heavy tasks will be done jointly, such as simulating data or developing an algorithm to measure success, and given greater familiarity with data which will be divided up into equal portions.