**Final Report: Project Title**

Report submitted to Fairfield University in partial fulfillment

of the requirements for the course of

IS 540: Data Mining and Business Intelligence

January 11, 2017

By

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**Executive Summary**

Add text

**1. Introduction**

**1.1 Background**

Add text

**1.2 Research Question**

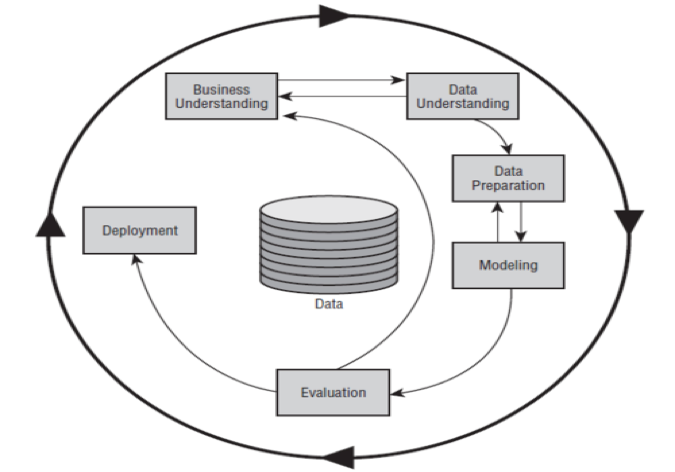
The research question of this project is: *How can we model the effect of macroeconomic factors on stock price?*

**1.3 List of Term**

Add text

**1.4 Methodology**

Throughout this project we used the Cross Industry Process for Data Mining (CRISP-DM) as a skeleton to base our project on.



**Figure 1. Phases of the CRISP\_DM reference model**

***Business Understanding***

Add text

**Data Understanding**

Add text

**Data Preparation**

Add text

**Modeling**

Add text

**Evaluation**

Add text

**Deployment**

Add text

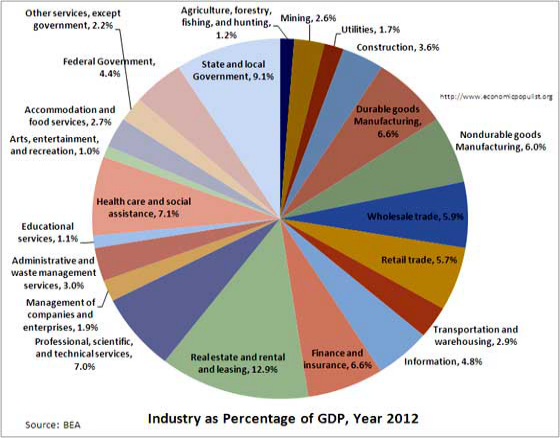
**2. Analysis**

**2.1 Experiment Data**

Add text

**Observation selection**

Add text



**Figure 2. An Nice Example of Colored Diagram**

**Variables selection**

Add text – compare pairs of variables using correlation

**Consumer Price Index for All Urban Consumers: All Items**

**Consumer Price Index for All Urban Consumers: All Items Less Food & Energy (.999)**

We have chosen to move out “Consumer Price Index for All Urban Consumers: All Items Less Food & Energy” as we would like to look at the Consumer Price Index for all items including food and energy. Although a very minor difference, we believe that this may help in modelling any company that is within the food or energy sector

**2.2 Data Processing**

Add text

**Table 2. An Example of a Nice Table**

|  |  |  |
| --- | --- | --- |
| The 16 companies’ data | FRED daily data | FRED monthly data |
| 1/29/Year 1/30/Year 1/31/Year | 1/29/Year 1/30/Year 1/31/Year | 2/1/Year |
| 4/28/Year 4/29/Year 4/30/Year | 4/28/Year 4/29/Year 4/30/Year | 5/1/Year |
| 7/29/Year 7/30/Year 7/31/Year | 7/29/Year 7/30/Year 7/31/Year | 8/1/Year |
| 10/29/Year 10/30/Year 10/31/Year | 10/29/Year 10/30/Year 10/31/Year | 11/1/Year |

**2.2.1 Imputation**

Add text

**2.2.2 Normalization**

Add text

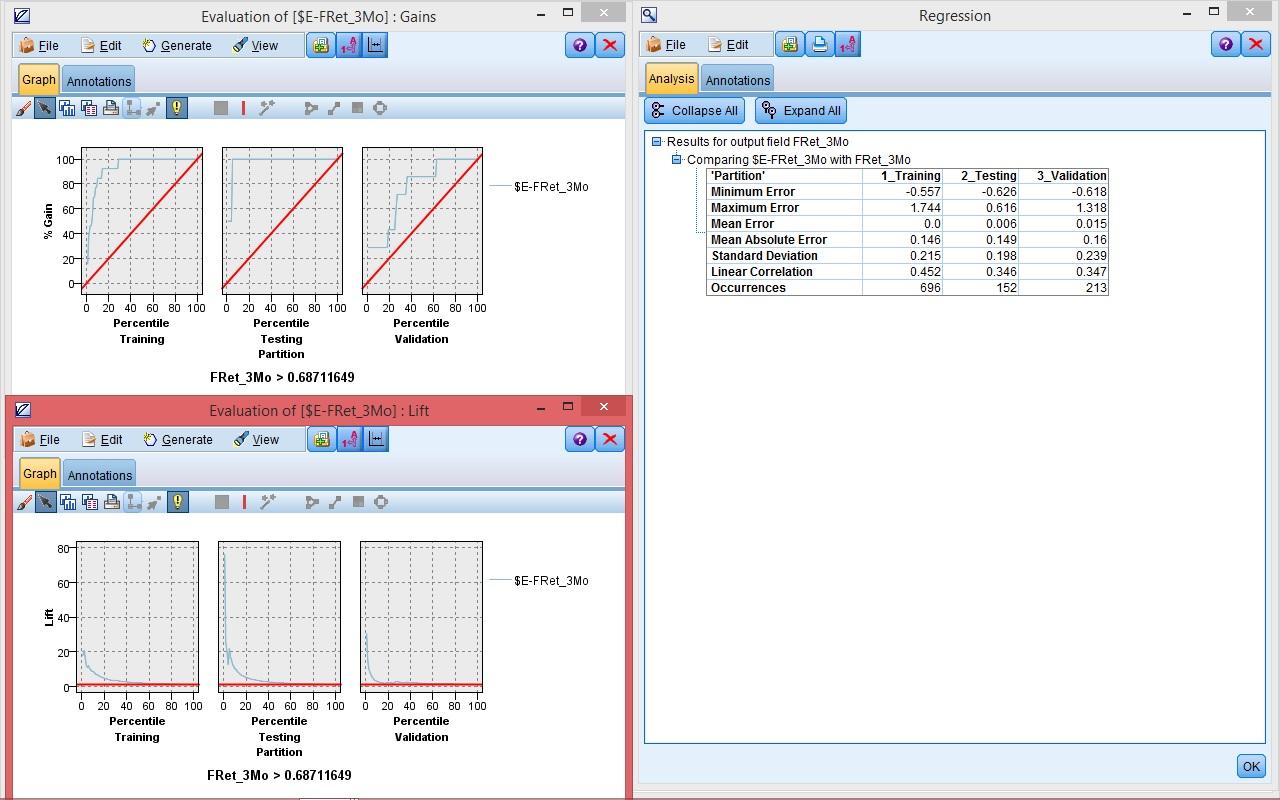
**2.3 Modeling**

**2.3.1 Modeling Techniques**

Add text

**ARIMA**

Add text



**Figure 3. A Good Example of Screenshot**

**2.3.2 Evaluation**

Add text

**3. Results & Discussion**

**3.1 Interpretation**

Add text

**3.2 Comparison**

Add text

**4. Conclusion**

Add text

**5. Lessons Learned**

**5.1 What and how we did in project? What we learned?**

Add text

**5.2 What we can improve in next project?**

Add text

**6. Reference**

Add text

**7. Appendices**

**7.1 Appendix A: Tables and Figures**

**Tables: Put descriptive statistics, data dictionary, and other data understanding tables here**

**Figures: Put Results, Visualizations, and Screenshots here**

**7.2 Appendix B. Work Log**

Table 17. Work Log

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Student 1 | Student 2 | Student 3 | Student 4 |
| Imputation Method | Overall Mean | Moving Mean | ARIMA | Linear |
| Presentation | Host & Page 1-4 | Page 17-25 | Page 14-16 & Page 26-28 | Page 5-13 |
| Report | 0.Executive Summary | 2. Analysis | 2.Analysis | 2. Analysis |
|  | 1. Introduction | 3. Results & Discussion | 4. Conclusion | Appendix |
|  |  | 4. Conclusion |  |  |