ANALYTICS PLATFORM FOR PREDICTING IMPACT OF EVENTS

1 Overview

The Platform allows users with little IT background to analyse data related to various events and their influence of Australian companies.

1.1 Overall functions

The platform provides any (not necessarily all of them) of the following functions for a user:

- Ability to browse news related to a particular industry sector over a period of time, identify news events of interest

- Ability to examine Australian statistics over a period of time, identify particular trends

- Ability to analyse impact of events of interest on company trading data over a period of time

These functions should be provided through a user friendly and integrated GUI. These requirements are very general and it is expected that teams will be delivering very different solutions at the end of the workshop.

2 First stage

The platform should be developed incrementally. We suggest that in the first stage, each team starts developing a GUI that invokes their own API.

- Impact Analysis Requirements will be built on top of Company Returns API (API1) first.
- News Processing Requirements will be built on top of News API (API2) first.
- Statistical Trends Requirements will be built on top of Australian Statistics API (API3) first.

2.1 Impact Analysis requirements

The requirements are meant to look at how a group of companies share price can be affected by events over a specific period around these events. For this, the average cumulative return for these companies is computed and displayed. This process is iterative as the analyst can rerun the analysis with different parameters.

Id	Functional requirement	Comments
1	Ability to specify a list of companies with event dates	List of variable values need to be supplied for each company
2	Ability to compute cumulative returns for a group of companies	Ability to filter companies according to variable values and re-run the analysis
3	Visualizing cumulative returns over a price window	Ability to see if event affected positively, negatively or no effect

2.2 News processing requirements

The requirements are meant to help identify news of interest i.e. news that have affected the agricultural sector. These requirements are indicative, they can be changed.

Id	Functional requirement	Comments
1	Ability to select news related to a particular	Suitable topic codes must be identified

	area of interest (via topic codes)	
2	Ability to select news related to companies	A company is identified by its Reuters Instrument Code (RIC)
3	Visualizing news over a time line	Ability to filter/change timeline

2.3 Statistical Trends Analysis requirements

The requirements are meant to look at how retail or commodity trading trends are expected to change within a year or two. The analyst should be able to focus on any type of retail sector or commodity type, compare between different regions or look at average values. This process is iterative as the analyst can rerun the analysis with different parameters.

Id	Functional requirement	Comments
1	Ability to view retail or commodity statistics over different regions in Australia	Ability to specify retail or commodity type
2	Visualizing individual or aggregate trends	Ability to specify a time period
3	Comparing trends between different regions	Ability to visualize the comparison

3 Second stage

In the next stage, each team will have the choice of adding new requirements in consultation with their mentor. These new requirements will result in either:

- Extending their GUI based on the same API
- Invoking other APIs (from other teams or external systems)
- Creating new APIs to integrate other types of data (provided by the LIC)

The second stage gives a lot of freedom for the teams to choose an application area they are interested in, they can refine their ideas during mentoring sessions.