Market Sentinel

The Commercial Value of Natural Language Processing

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About Market Sentinel

- London and New York
- Founded 2004
- Execs from Amazon, BBC, BT, Cap Gemini, Systems Union
- 20 employees – Brand Managers, PR Managers, Business Consultants, Journalists, Market Researchers
- 50 blue chip clients in UK, EU and US
- Award winning social media campaigns
- Privately held
What we do

Social media monitoring, analysis and response.

Buzz monitoring tool (*LiveBuzz*)
Influencer studies (*MarketInfluence*)
Regular Reporting
Analyst Calls

**Portfolio:**

New Product Launch
Crisis Management
Reputation management – CSR/Company level
Campaign Management
Techniques
Business uses of natural language processing:

Finding on topic content

Looking for topics

Deriving sentiment
Techniques

Computers are **good** at processing large amounts of data

(e.g. Search string: Google returns 17.2 million pages for “Hamlet” in 0.2 seconds)

but…

They are **poor** at interpreting meaning

(e.g. Google cannot distinguish between the **play by Shakespeare** and the **cigar brand** of the same name.)
Techniques

Humans are **good** at interpreting meaning

(e.g. *a human being wrote Hamlet*)

But...

They are **poor** at processing large amounts of data

(e.g. *Computer-assisted language analysis helped scholars to identify Shakespeare as the author of “A Funeral Elegy”*)
Techniques

The valuable insights are in the unexpected patterns, for instance disproportionately occurring words:
Unexpected negatives compared to the rest of industry:
Techniques

- **Patterns of mutual citation** within a given topic can provide insights into influence.
Techniques

This points to the business value of how the results of processing are displayed to the user.

In other words, there is business value in user interfaces which are designed to work with NLP tools.
TopicExplorer: User Interface

Network Visualisation  Stakeholder Table

Treatments/the rapy for obesity graph
filtered by: Influence

Click a node in the gra...
“Period G” by Meredith 1 week, 4 days ago
ROI: Return on Investment
Return on Investment

What is the commercial value of natural language processing?

Cost
It is much cheaper than surveying

High value insights
Better data than from a survey (evidence vs. survey effect)
Not led by the question – academic issue
But beware – only certain subjects are addressed

Benchmarking
Low cost benchmarking against competitors
Case study

We looked for topics where Avis scored differently to its competitors (Hertz):

- Lack of GPS in cars (Negative)
- Lack of loyalty programme (Negative)

Avis used these insights to change their products, and grew by 12% grow p.a. in a 1% industry.
Return on Investment

Wisma

e.g. We used citation analysis to discover the main influencers in the online grassroots campaign to bring back Cadbury’s Wispa chocolate bar.

Cadbury’s social media campaign cost of less than £250k, and help to sell £25 million worth of Wispa bars.
Next steps...
What are the next steps for commercially useful natural language processing?

Google interpreted the hyperlink.

The next steps:

Interpreting mentions
Automated identification and resolution of entities
Topic extraction and clustering
Using citation networks to understand the meaning of topics and trends