

Applying Artificial Intelligence For Sentiment Analysis: Our Experience & Approach

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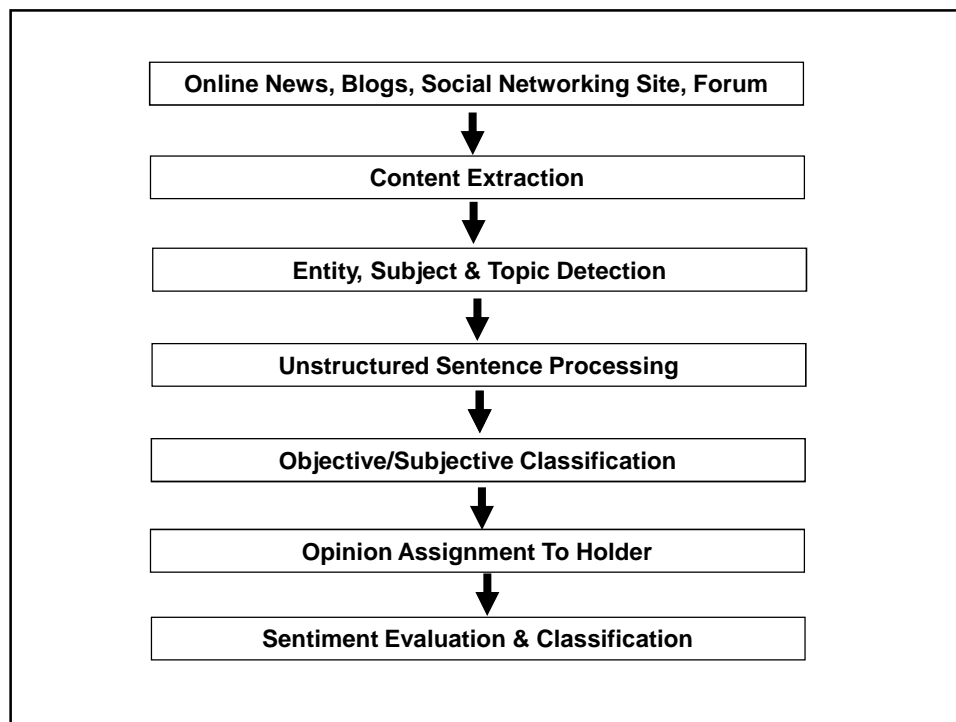
Today's Agenda

- Project Overview
- Project Technical Drilldown
- Our R&D Experience
- R&D Benefit
- R&D Success In US
- Conclusion

Project Overview

- Monitor Sentiment Expressed In Traditional & New Media
- Allow User To
 - Clearly Understand Public's Perception & Sentiment
 - Have Information For Decision Making
 - A Platform For Trusted Recommendation
 - Allow Individual Opinion, Comment & Complain To Be Heard
 - Take Proactive Action To Improve Their Products, Services, Branding & Reputation

- Automatically Process Unstructured Data, Identify Subject & Topic & Extract Sentiment From The Data
- Result Is Presented In Positive, Negative & Neutral Category
- Function Without Human Intervention
- Capable To Support Subjects and Topics In Any Domain
- Commercial Application Area
 - Brand Monitoring
 - Word-Of-Mouth Measurement
 - Customer Perception Analysis
 - News Analysis
 - Advertising



Technical Drilldown

- Unstructured Sentence Processing
 - Tagging & Parsing According To English Grammatical Rules
 - Apply Part of Speech (POS) Tagging & Linguistic Parsing Based On Dependency Parsing
- Objective/Subjective Classification
 - Classify Sentence Into Objective/Subjective Category
 - Evaluate Word, Clause & Sentence Meaning
 - Apply Semantic Matching & Parsing On Words, Clause & Sentence Structure

- Opinion Assignment To Holder
 - Assign Opinion To Corresponding Subject & Topic
 - Apply Linguistic Parsing To Analyze Dependency Between Subject/Topic & Opinion
- Sentiment Evaluation & Classification
 - Analyze Sentiment Expressed In The Clause & Sentence
 - Analyze Dependency Between Sentences
 - Classify Sentence & Opinion To Positive, Negative & Neutral Category
 - Domain Independent Sentiment Classification Using Semantic Based Sentiment Matching & Parsing

Our R&D Experience

- It's Possible To Complete R&D Project Without Any External Collaboration
- Manage R&D Project Like Commercial Project
- Be Resourceful & Think 'Out Of The Box'
- Only Accept Solution That's Capable To Achieve The Desired Outcome
- Protect Your Invention As Soon As Possible
- Invention & Technology Require Time To Nurture
- Be Prepared To Face Setback, Both Technically & Commercially

“It’s a mistake to predict the size of markets that are so new. This model has shown no signs of slowing down. So we are going to get as much of it as we possibly can, and when we get close to that we’ll figure out other problems” Eric Schmidt, CEO, Google

“When you innovate, you’ve got to be prepared for everyone telling you you’re nut.” Larry Ellison, CEO, Oracle Corporation

“You don’t need to have a 100-person company to develop that idea” Larry Page, Co-Founder, Google

“Innovation distinguishes between a leader and a follower” Steve Jobs, CEO, Apple Computers

R&D Success In US

- Peer39
 - Apply Semantic Technology In Online Advertising
 - Ranked One Of 10 Web Startup To Watch In 2008, MIT Technology Review
 - Company Value At \$50 Million
- VirtuIOz
 - Apply Artificial Intelligence In Virtual Chatbot
 - Raise \$11.4 Million Funding
- Animoto
 - Apply Artificial Intelligence In Self-Service Video Production

- Funded By Amazon
- Powerset
 - Apply Artificial Intelligence In Search Engine
 - Acquired By Microsoft At \$100 Million Value
- Tellme Networks
 - Speech Recognition Provider
 - Acquired By Microsoft At \$800 Million Value
- Freebase
 - Organize World Information In Structured Format
 - Raise More Than \$40 Million

Conclusion

- Artificial Intelligence Has Wide Application In Different Business Domains
- Other Emerging Research & Technology Includes
 - Voice Recognition
 - Image Recognition/Processing
 - Digital Signal Processing
 - Mainstream Location Based Service
- Review Technology Roadmap & Solution Offering
- Tap Into The Available R&D Financial Incentive

