



IBM assignment

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IBM Bluemix™

Part 1

- Bluemix contribution to sentiment analysis
- Tone analyzer example
- Personality Insights example
- AlchemyAPI example

Part 2

- Data analyst's application needs

Bluemix contribution to sentiment analysis

1



Tone Analyzer
IBM

IBM Watson Tone Analyzer Service

- ✓ Detects 3 types of tones:
 - I. Emotions
 - II. Social Tendencies
 - III. Writing Style
- ✓ Infer the emotional impact of a text

2



Personality
Insights
IBM

IBM Watson Personality Insights

- ✓ Derive insights from digital data
- ✓ Personality portraits
- ✓ Deeper understanding of the consumers

3



AlchemyAPI
IBM

IBM Watson AlchemyAPI

- ✓ Build applications
- ✓ Understand content and context
- ✓ Extract useful informations

Examples overview

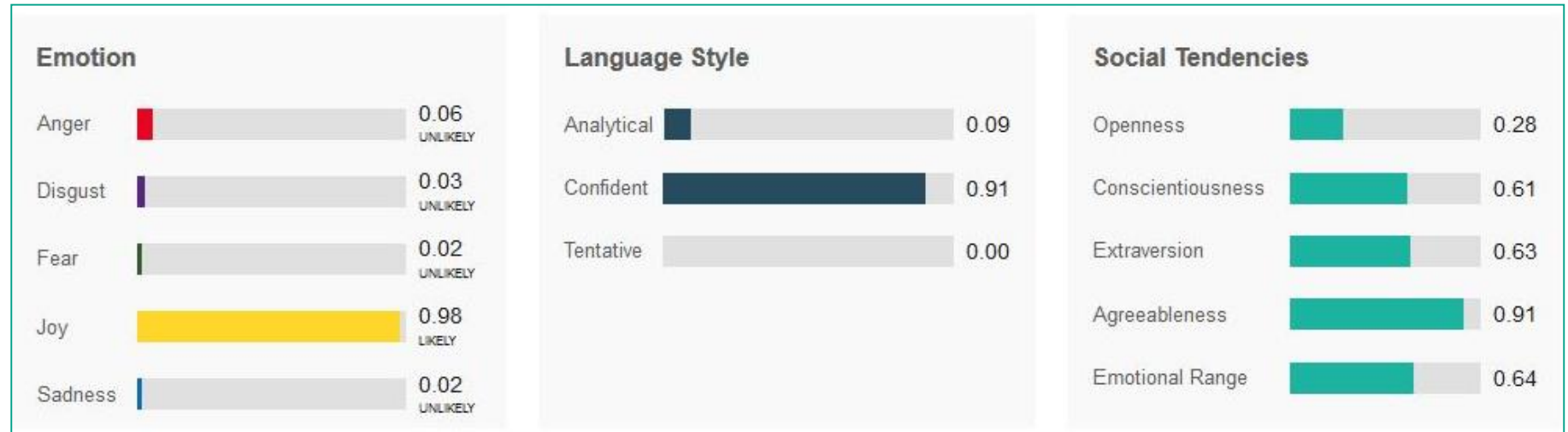
- Reviews from TripAdvisor
- 3 different reviews for the same destination:
 - Good
 - Average
 - Bad



Tone Analyzer
IBM

Tone Analyzer example

Good review



Bad review

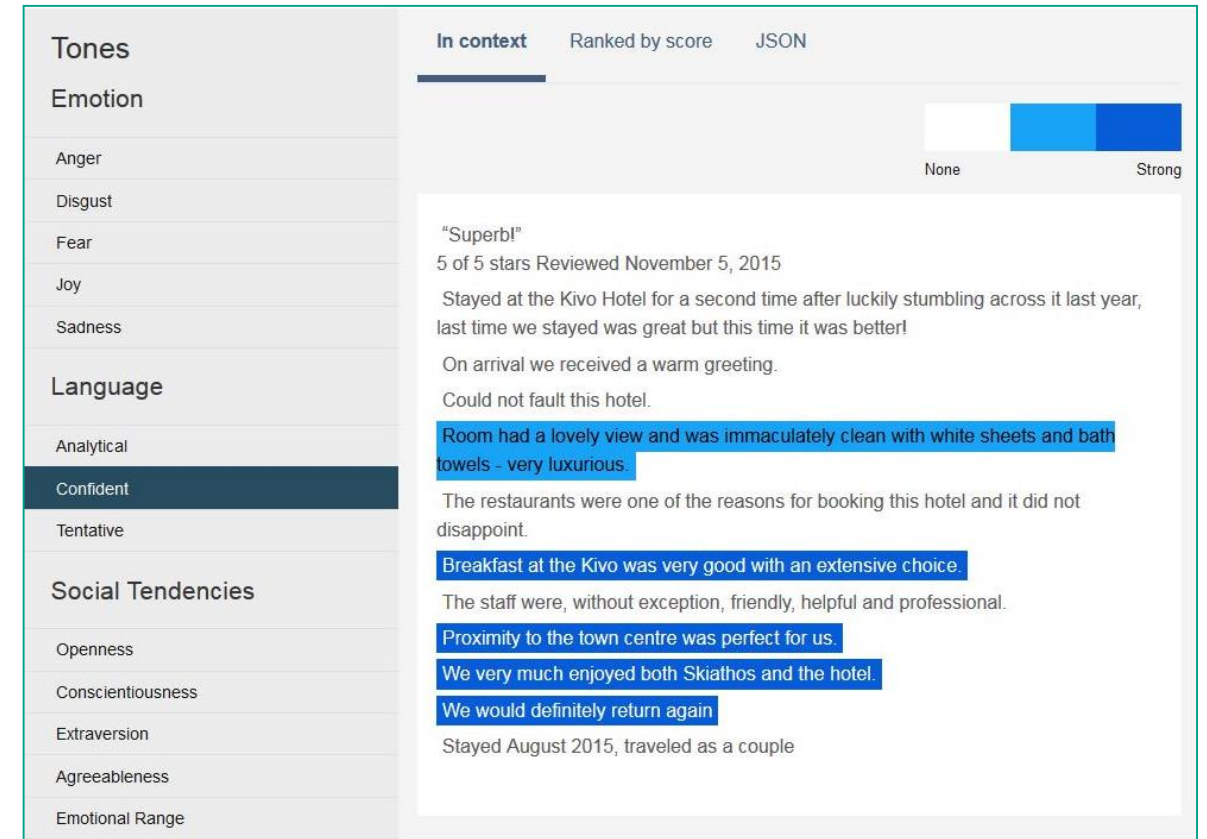
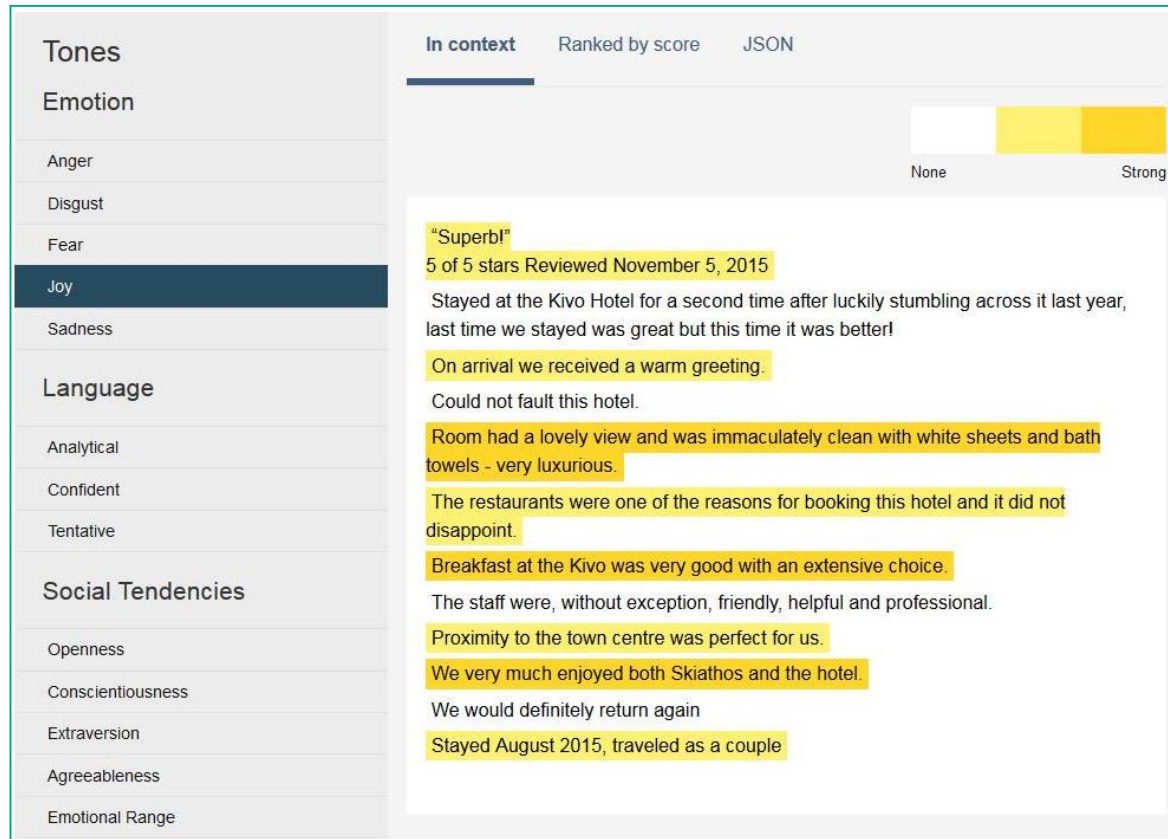




Tone Analyzer
IBM

Tone Analyzer example

Good review text analysis



Bad review text analysis

Tones

Emotion

Anger

Disgust

Fear

Joy

Sadness

Language

Analytical

Confident

Tentative

Social Tendencies

Openness

Conscientiousness

Extraversion

Agreeableness

Emotional Range

In context

Ranked by score

JSON

None

Strong

"Disappointing"

Reviewed September 22, 2015

Customer service at this hotel is non-existent with the exception of Nic.

They're rude and down- right surly.

The courtesy 'bus' turned out to be a battered Citroen Saxo into which they crammed 4 guests and the driver.

Our room was very basic, the bathroom was mouldy, and our sheets didn't fit the bed.

There were 2 weddings during our stay and we were told that we couldn't use the pool, bar or restaurant from 12.30 on both days.

No apology, no alternative arrangements.

When our room hadn't been cleaned and I complained I was told that the cleaners had 'lost' our key.I?

The safe was attached to anything so you can imagine how secure that made us feel.

The bar staff switched off the bar lights one evening as my husband and I were having a night cap at 11.30 pm, but the weddings went on until 3 or 4 am.

On the plus side, the pool was clean, the views were fantastic and we received

Tones

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Emotional Range

In context

Ranked by score

JSON

Ascending

0.68

When our room hadn't been cleaned and I complained I was told that the cleaners had 'lost' our key.I?

0.51

Reviewed September 22, 2015

Customer service at this hotel is non-existent with the exception of Nic.

0.44

They're rude and down- right surly.

0.34

The bar staff switched off the bar lights one evening as my husband and I were having a night cap at 11.30 pm, but the weddings went on until 3 or 4 am.

0.28

Our room was very basic, the bathroom was mouldy, and our sheets didn't fit the bed.

0.26

The courtesy 'bus' turned out to be a battered Citroen Saxo into which

In sentences_tone, each sentence_id receives a raw_score for each tone in a category. Understand how to normalize raw scores or customize thresholds for your use case in the [Documentation](#).

Personality Insights example

Average review personality analysis

Personality Portrait

615 words analyzed: **Weak Analysis**

Summary

You are inner-directed and tranquil.

You are calm-seeking: you prefer activities that are quiet, calm, and safe. You are calm under pressure: you handle unexpected events calmly and effectively. And you are independent: you have a strong desire to have time to yourself.

Your choices are driven by a desire for efficiency.

You are relatively unconcerned with achieving success: you make decisions with little regard for how they show off your talents. You consider independence to guide a large part of what you do: you like to set your own goals to decide how to best achieve them.

[How did we get this?](#)

You are likely to_____

- ☒ Click on an ad
- ☒ Follow on social media
- ☒ Buy healthy foods

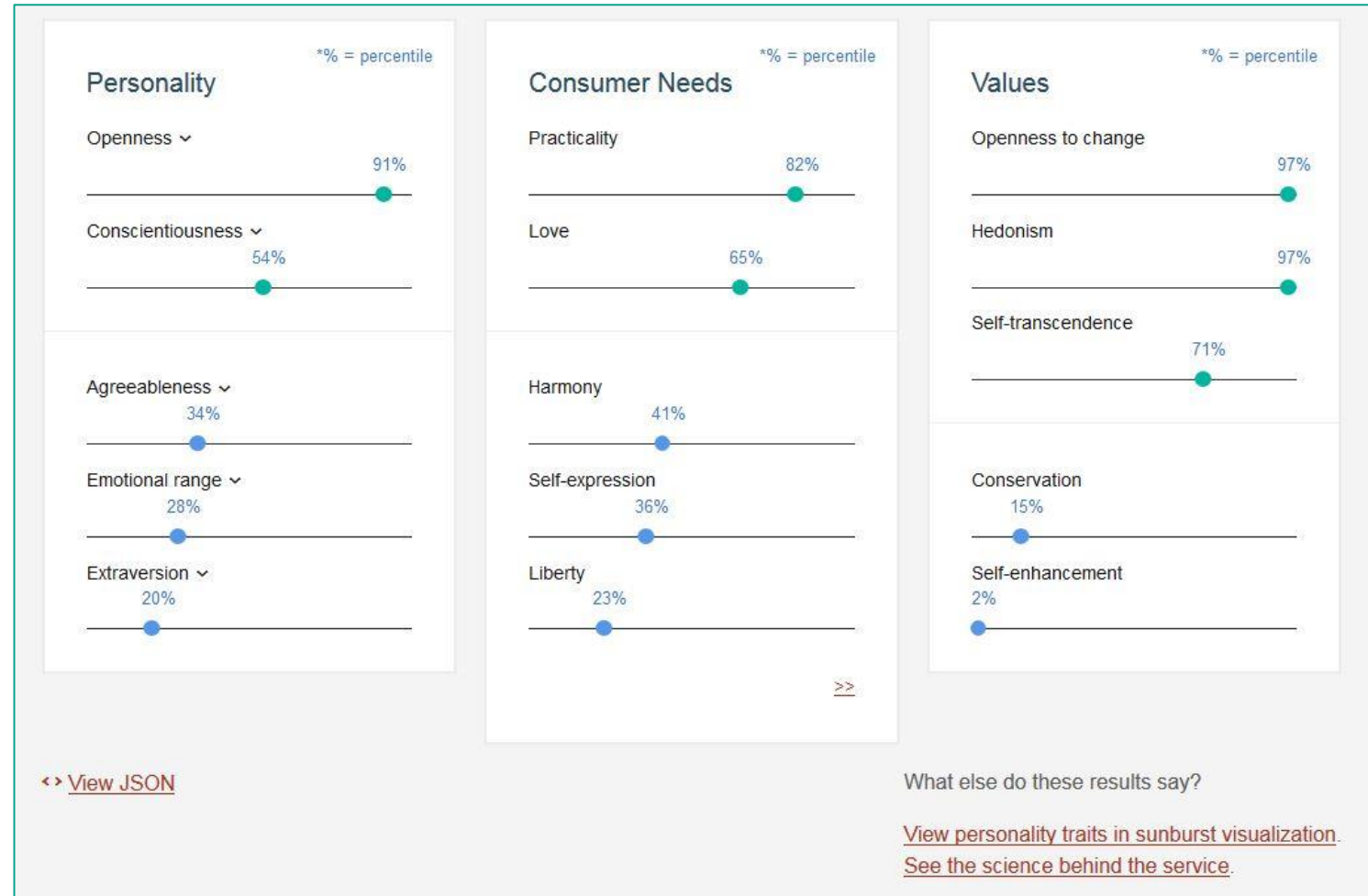
You are unlikely to_____

- ☐ Reply on social media
- ☐ Buy eco-friendly
- ☐ Adapt to situations



Personality Insights example

Average review personality analysis



AlchemyAPI example

Good review

Entities	Kivo		Skiathos		Kivo Hotel	
Keywords						
Taxonomy						
Concepts						
Document Sentiment						
Targeted Sentiment						
Document Emotions (Beta)						
Relations						
Language						
Title						

Entities	restaurants	reasons	couple	Superb	extensive choice	lovely view
Keywords						
Taxonomy	hotel		Breakfast	time		
Concepts			Proximity		white sheets	
Document Sentiment			arrival	town centre		warm greeting
Targeted Sentiment	stars	Kivo Hotel				
Document Emotions (Beta)						
Relations	exception		Skiathos		bath towels	
Language						
Title						

AlchemyAPI example

Good review

Entities	Label	Score	Confident?
Keywords	/travel/tourist facilities/hotel	0.744461	
Taxonomy	/shopping/gifts/greeting cards	0.367502	no
Concepts	/travel/tourist facilities/bed and breakfast	0.362646	no

Entities	Concept	Relevance	Linked Data
Keywords	Bathing	0.910699	dbpedia freebase
Taxonomy			
Concepts	Sauna	0.88114	dbpedia freebase
Document Sentiment	Inn	0.821395	dbpedia freebase
Targeted Sentiment			
Document Emotions (Beta)	Hotel	0.8188	dbpedia freebase
Relations	Towel	0.818336	dbpedia freebase
Language	Bed and breakfast	0.796909	dbpedia freebase
Title			

Good review

Entities	Sentiment	Score
Keywords	positive	0.658235
Taxonomy		
Concepts		
Document Sentiment		

Entities	Emotion	Score
Keywords	anger	0.057844
Taxonomy	disgust	0.028507
Concepts	fear	0.0175
Document Sentiment	joy	0.975688
Targeted Sentiment	sadness	0.02119
Document Emotions (Beta)		

Entities	Target	Type	Sentiment
Keywords	Kivo Hotel	Entity	mixed
Taxonomy	Skiathos	Entity	positive
Concepts	Kivo	Entity	positive
Document Sentiment	warm greeting	Keyword	positive
Targeted Sentiment	lovely view	Keyword	positive
Document Emotions (Beta)	bath towels	Keyword	positive
	white sheets	Keyword	positive
Relations	extensive choice	Keyword	positive
Language	hotel	Keyword	mixed
Title	town centre	Keyword	positive

Use of the results

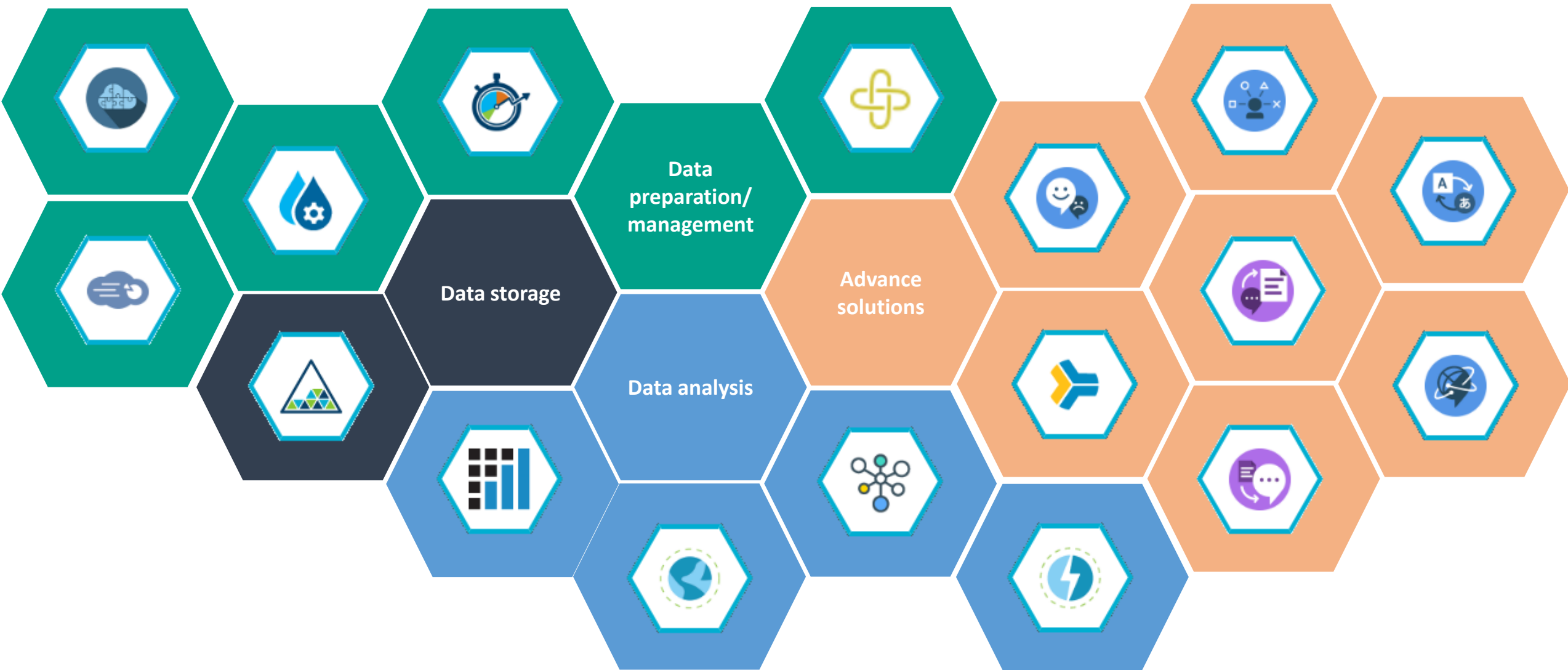
Detection of problems

Deeper understanding
of the consumers

Consumer's
perspective

Individually
customized
suggestions

Data analyst's needs





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...thank you!