Watson
Conversation

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Watson
Agenda

1. Watson for Engagement
2. Introducing Watson Conversation Service
3. Q&A
Watson for Engagement
Cognitive systems are different

UNDERSTAND
Cognitive systems understand imagery, language and other unstructured data like humans do.

REASON
They can reason, grasp underlying concepts, form hypotheses, and infer and extract ideas.

LEARN
With each data point, interaction and outcome, they develop and sharpen expertise, so they never stop learning.

INTERACT
With abilities to see, talk and hear, cognitive systems interact with humans in a natural way.
“By 2020, smart agents will facilitate 40% of mobile interactions, and the post-app era will begin to dominate.” – Gartner

http://www.gartner.com/newsroom/id/3143718
A New Partnership Between Humans and Technology

**Human:**
- Common Sense
- Morals
- Imagination
- Compassion
- Abstraction
- Dreaming
- Generalization

**Cognitive Systems:**
- Locating Knowledge
- Pattern Identification
- Natural Language
- Machine Learning
- Eliminating Bias
- Endless Capacity
Meeting Higher Expectations

- Multiple social profiles
- Less loyal to singular brand
- Versed in design thinking
- Have omni-channel expectations
Customers are shifting from Traditional Channels

**Then**

Customer → Customer

**Now**

Example of messaging platforms
Watson as the Center of Customer Engagement

- Watson offers better user experience
- Able to resolve calls through integrated actions
- Minimizes call deflections
- Allows you to build a single application across multiple platforms.
Watson Displays Human-Like Characteristics

• Listens
• Understands
• Relates
• Emphasizes
• Resourceful
Create natural language interactions with the customer, including Q&A and onboarding.

Walk customers through business processes like application forms or resetting a password.

Detect emotional states and responds in appropriate ways.

Maintain cross-platform mobile and web experience.

Robot SDK is available now. Watson also has partnerships with leading robotic manufacturers.

Incorporate advanced Machine Learning capabilities.
Leverage Watson APIs to apply cognitive capabilities.

**Over 50 APIs at the start of 2017**

- Entity Extraction
- Sentiment Analysis
- Emotion Analysis (Beta)
- Keyword Extraction
- Concept Tagging
- Taxonomy Classification
- Author Extraction
- Language Detection
- Text Extraction
- Micro formats Parsing
- Feed Detection
- Linked Data Support
- Concept Expansion
- Concept Insights
- Dialog
- Document Conversion
- Language Translation

- Natural Language Classifier
- Personality insights
- Relationship Extraction
- Retrieve and Rank
- Tone Analyzer
- Emotive Speech to Text
- Text to Speech
- Face Detection
- Image Link Extraction
- Image Tagging
- Text Detection
- Visual Insights
- Visual Recognition
- AlchemyData News
- Tradeoff Analytics

- Retrieve and Rank
- Natural Language Classifier
- Tone Analyzer

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*The first person mentioned by name in 'The Man in the Iron Mask' is this hero of a previous book by the same author.*
Introduction of Conversation Service
Question Distribution

Retrieve and Rank
Here Watson uses reasoning strategies that focus on identifying the most appropriate answer.

Watson Conversation
Here Watson uses reasoning strategies that focus on the language and context of the question.

What is my Routing Number?
I need to Wire Transfer money between the US and UK within 24 hours is there a fee associated with that?

Frequency of Questions

Short Tail

Long Tail

Unique Intents

100s

100,000+
IBM Watson Conversation Service

**Description**

- Enables Developers with Business users to create natural, human-like conversational experiences across all channels (e.g. mobile, messaging, robots, etc.)
- Combines Intents, Entities and Dialog into a seamless experience

**Benefits**

- Enables customers to self-serve on their terms
- Delivers information and services with a consistent, on-brand and engaging experience
- Reduces costs through deflection of calls to Contact Centers
IBM Watson Retrieve & Rank Service

**Description**
- Helps users find relevant information for a query by using a combination of search & machine learning algorithms to detect "signals" in the data.
- Ability for organizations to sync content between their Enterprise and the Cloud service

**Benefits**
- If Conversation unable to identify answer, R&R uses enhanced information retrieval capabilities to provide possible responses.
- Allows Enterprise to have the ability to choose the content repository so that users are getting trusted information
Simple Conversation Sample
I’m frustrated, I haven’t been able to login into your online billing system...
Understand the Customer’s Intent

• Leverages state of the art Deep Learning techniques to derive intent

• Watson has read Wikipedia enabling it to understand language and concepts

• Learns over time based on usage

• Handcrafted rules unable to scale and do not benefit from data

I forgot my password...

How do I get a new password?

Can’t login into your site…

My login isn’t working, please help…

Can you reset my password?

Intent = Password Reset
"I’m frustrated, I haven’t been able to login into your online billing system."

**Intent**: Password Reset
“I’m frustrated, I haven’t been able to login into your online billing system”

Intent: Password Reset

Entities: Online Billing System
“I’m frustrated, I haven’t been able to login into your online billing system.”

**Intent**: Password Reset

**Entities**: Online Billing System

**Emotional Tone**: Anger*
“I’m frustrated, I haven’t been able to login into your online billing system.”

**Intent**: Password Reset

**Entities**: Online Billing System

**Emotional Tone**: Anger

**Context**: Bill Smith, 47, Gold Member, High Value

**Context**: Mobile
**Take Action:**
Responses Come in Different **Forms**

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do I reset my password?</td>
<td>Dialog Guide the user through a set of steps</td>
</tr>
<tr>
<td>Someone has stolen my credit card.</td>
<td>Deflect Transfer to human agent</td>
</tr>
<tr>
<td>Where is the nearest store?</td>
<td>Map Application launches map with directions</td>
</tr>
<tr>
<td>I need to pay my outstanding invoice.</td>
<td>App Nav. Bring user to pay bill screen</td>
</tr>
<tr>
<td>Can I pay my bills using my credit card?</td>
<td>Info. Retrieval Bring back an answer</td>
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