Using AWS and IBM Watson’s NLP

German F. Retana
IT Teaching Workshop 2017 @ UCI
May 19, 2017
Content of two *Digital Transformation* core courses

**My course**

- Creation and operation of digitized platforms
  - Governance, Security, HW infrastructure, SW
  - Dev, App Architecture, Cloud, DevOps

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**1st course**

- Adoption and implementation of information systems
  - IT strategy, ERP, CRM, BI, SQL

**Overarching framework**

Westerman, Bonnet, McAfee (2014) Leading Digital
I’m not the only one thinking this way...

“the current business environment requires all leaders to view their companies as software businesses … this approach recognizes a fundamental shift in the sources of value creation and competitive advantage toward software.”

Harvard Business Review

You Don’t Have to Be a Software Company to Think Like One

by Vijay Gurbaxani
APRIL 20, 2016

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The Challenge

Our MBA Student’s backgrounds

Finance  Law  Biology  Agronomy  Marketing  Management

Demystifying IT

The rationale behind the labs

FEAR
- I can <fill in best traditional tool> yet how things work is still a black box.
- “I don’t like IT because I don’t understand it”

AHA!
- Small successes with IT, even at high level of understanding, break barriers.
- “I did not know it was so simple”

LEARN
- We open door to self-driven exploration and learning.
- “Now I can talk to the IT folks, and understand them!”
E-Commerce
Web App
E-Commerce Lab Outcomes

IT stacks are not black magic
The Labs

E-Commerce
Web App

Cloud IaaS

Amazon EC2

MAMP XAMPP
Apache MySQL
php
WordPress Woo Commerce

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Cloud Lab

There’s more to “cloud” than Dropbox and Google Apps
Let’s deploy WordPress on AWS

Send the URL to your classmate, or to your mom!

WordPress powered by Bitnami
Sold by: Bitnami

Bitnami WordPress is a pre-configured, ready to run image for running WordPress on Amazon EC2. WordPress is one of the world’s most popular web publishing platforms for building blogs and websites. It can be customized via a wide selection of themes, extensions and plug-ins.

<table>
<thead>
<tr>
<th>Customer Rating</th>
<th>★★★★★ (17 Customer Reviews)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latest Version</td>
<td>4.7.4-0 on Ubuntu 14.04.3 (Other available versions)</td>
</tr>
<tr>
<td>Operating System</td>
<td>Linux/Unix, Ubuntu 14.04.3</td>
</tr>
<tr>
<td>Delivery Method</td>
<td>64-bit Amazon Machine Image (AMI) (Read more)</td>
</tr>
<tr>
<td>Support</td>
<td>See details below</td>
</tr>
<tr>
<td>AWS Services Required</td>
<td>Amazon EC2, Amazon EBS</td>
</tr>
</tbody>
</table>

Pricing Information
Use the Region dropdown selector to see software and infrastructure pricing information for the chosen AWS region.

For Region
US East (N. Virginia)
The Labs

E-Commerce
Web App

Cloud IaaS

Cognitive Computing

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Build cognitive apps that help enhance, scale, and accelerate human expertise.

**Conversation**
Add a natural language interface to your application to automate interactions with your end users.

**Discovery**
Add a cognitive search and content analytics engine to your applications.

**Language Translator**
Translate text from one language to another for specific domains.

**Natural Language Classifier**
Natural Language Classifier performs natural language classification on question texts. A user would be:

**Personality Insights**
The Watson Personality Insights derives insights from transactional and social media data to identify:

**Retrieve and Rank**
Add machine learning enhanced search capabilities to your application.

**Text to Speech**
Synthesizes natural-sounding speech from text.

**Tone Analyzer**
Tone Analyzer uses linguistic analysis to detect three types of tones from communications: emotion, style, and context.

**Document Conversion**
Converts a HTML, PDF, or Microsoft Word™ document into a normalized HTML, plain text, or a set of JSON.

**Natural Language Understanding**
Analyze text to extract meta-data from content such as concepts, entities, emotion, relations, sentiment and tags.

**Speech to Text**
Low-latency, streaming transcription
Resources

• **Bluemix:**
  https://www.ibm.com/cloud-computing/bluemix/

• **Conversation:**
  https://www.ibm.com/watson/developercloud/
doc/conversation/getting-started.html

• **Feedback and suggestions:**
  gf@incae.edu | @germanretana
Need some basics on application architecture

At minimum, know that software can talk to software

Source: https://www.ibm.com/watson/developercloud/doc/conversation/