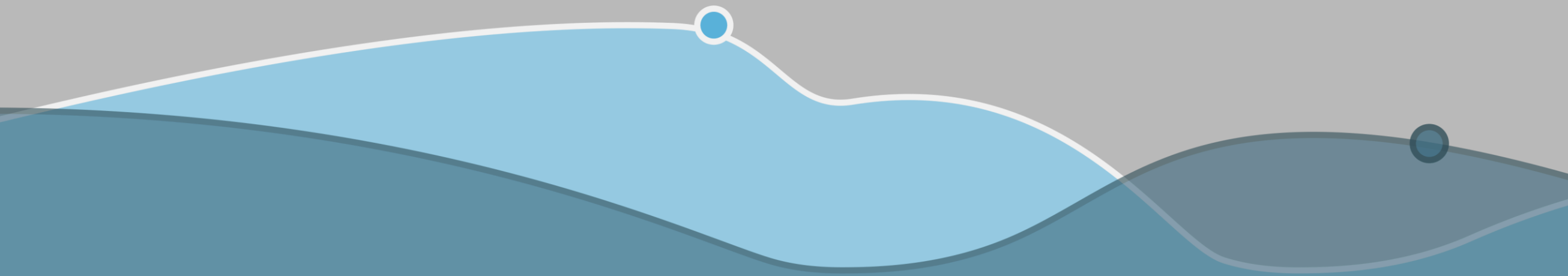




Cortana Analytics Workshop

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Natural Language Understanding using Cortana Analytics

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Cortana Analytics Suite

Transform data into intelligent action



Text Analytics on Azure

- Text Categorization
- Taxonomy Creation
- Text Clustering
- Summarization
- Keywords Extraction/Key Phrase Extraction
- Language Detection
- Information Extraction (Person, Location, Organization)
- Entity-Relation Extraction



Text Categorization

- Text Categorization aims to assign a text segment into one or more class(es) in a predefined set of classes.
- Text segment could be document, search query, email, tweet, service request, customer/partner feedback, etc.




Text Categorization Applications

- Categorize newspaper articles and newswires into topics
- Organize Web pages into hierarchical categories
- E-mail spam filtering
- Adult Content filtering
- Sentiment Analysis
- Search Query User Intent Prediction
- Support Ticket Team Routing
- Customer/Partner Feedback Analysis

Use Case Description

- Elena works for an Internet-based retailer company selling DVDs, software, video games, toys, electronics, and furniture. The company shows customers feedback at the product level.
- Her task is to build a pipeline that automatically analyzes customer feedback and Twitter messages, to provide the overall sentiment for each product.
- The aim is to help consumers who want to understand public opinion before purchasing a product.

Twitter Sentiment Analysis

- Goal
 - Check whether a tweet implies a positive/negative sentiment.
 - Data source
 - Sentiment140 Training Set
 - Source: Sentiment140 Sample for Academia
 - Dataset Description
 - <http://help.sentiment140.com/for-students>
 - Data fields: polarity (0=negative, 4=positive), tweet_id, tweet_date, query, user, tweet_text
 - 1.6 million tweets automatically annotated based on emoticons
- 



Twitter Sentiment140

polarity	tweet_id	tweet_date	query	user	tweet_text
0	1467810672	Mon Apr 06 22:19:49 PDT 2009	NO_QUERY	scotthamilton	is upset that he can't update his Facebook by texting it... and might cry as a result School today also. Blah!
0	1467810917	Mon Apr 06 22:19:53 PDT 2009	NO_QUERY	mattycus	@Kenichan I dived many times for the ball. Managed to save 50% The rest go out of bounds
0	1467811184	Mon Apr 06 22:19:57 PDT 2009	NO_QUERY	ElleCTF	my whole body feels itchy and like its on fire
4	1467822272	Mon Apr 06 22:22:45 PDT 2009	NO_QUERY	ersle	I LOVE @Health4UandPets u guys r the best!!
0	1467811193	Mon Apr 06 22:19:57 PDT 2009	NO_QUERY	Karoli	@nationwideclass no, it's not behaving at all. i'm mad. why am i here? because I can't see you all over there.
0	1467811372	Mon Apr 06 22:20:00 PDT 2009	NO_QUERY	joy_wolf	@Kwesidei not the whole crew
4	1467822447	Mon Apr 06 22:22:51 PDT 2009	NO_QUERY	vmdavinci	@r_keith_hill Thans for your response. I had already find this answer
0	1467811592	Mon Apr 06 22:20:03 PDT 2009	NO_QUERY	mybitch	Need a hug
4	1467822293	Mon Apr 06 22:22:46 PDT 2009	NO_QUERY	_EmilyYoung	@LovesBrooklyn2 he has that effect on everyone
4	1467822391	Mon Apr 06 22:22:47 PDT 2009	NO_QUERY	ajarofalmonds	@ProductOfFear You can tell him that I just burst out laughing really loud because of that Thanks for making me come out of my sulk!
0	1467811594	Mon Apr 06 22:20:03 PDT 2009	NO_QUERY	coZZ	@LOLTrish hey long time no see! Yes.. Rains a bit ,only a bit LOL , I'm fine thanks , how's you ?
0	1467811795	Mon Apr 06 22:20:05 PDT 2009	NO_QUERY	2Hood4Hollywood	@Tatiana_K nope they didn't have it
0	1467812025	Mon Apr 06 22:20:09 PDT 2009	NO_QUERY	mimismo	@twittera que me muera ?
0	1467812416	Mon Apr 06 22:20:16 PDT 2009	NO_QUERY	erinx3leannexo	spring break in plain city... it's snowing
0	1467812579	Mon Apr 06 22:20:17 PDT 2009	NO_QUERY	pardonlauren	I just re-pierced my ears
0	1467812723	Mon Apr 06 22:20:19 PDT 2009	NO_QUERY	TLeC	@caregiving I couldn't bear to watch it. And I thought the UA loss was embarrassing
4	1467822796	Mon Apr 06 22:22:53 PDT 2009	NO_QUERY	toothfairycyber	@LutheranLucciol Make sure you DM me if you post a link to that video! <LOL>So I don't miss it Better get permission and blessing first?
4	1467822814	Mon Apr 06 22:22:54 PDT 2009	NO_QUERY	misstoriblack	Just added tweetie to my new iPhone
4	1467822899	Mon Apr 06 22:22:58 PDT 2009	NO_QUERY	estairay	@michellardi i really don't know. i think its Globe! yeah! sana gumaling na ko para alam ko na din kung makakasama ako!)
4	1467822924	Mon Apr 06 22:22:55 PDT 2009	NO_QUERY	ddjuli	@nicolerichie: your picture is very sweet
0	1467812771	Mon Apr 06 22:20:19 PDT 2009	NO_QUERY	robobbierobert	@octolinz16 It it counts, idk why I did either. you never talk to me anymore
0	1467812784	Mon Apr 06 22:20:20 PDT 2009	NO_QUERY	bayofwolves	@smarrison i would've been the first, but i didn't have a gun. not really though, zac snyder's just a doucheclown.
0	1467812799	Mon Apr 06 22:20:20 PDT 2009	NO_QUERY	HairByJess	@iamjazzyfizzle I wish I got to watch it with you!! I miss you and @iamilnicki how was the premiere?!
4	1467822465	Mon Apr 06 22:22:48 PDT 2009	NO_QUERY	jessicavaliyi	@KeepinUpWKris I am so jealous, hope you had a great time in vegas! how did you like the ACM's?! LOVE YOUR SHOW!!

Demo



<https://github.com/mohabdel2013/CortanaAnalyticsWorkshop>

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