

# Daniel Stange

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Github: [github.com/dstdia](https://github.com/dstdia)



Hey Einstein!  
Thank you for  
making my CRM even  
greater

positive: 0.52506375  
neutral: 0.4672660  
negative: 0.0076701688

### Let's find out

- What's new in the Einstein Platform
- How to get Einstein predictions via API
- What the use cases are
- Benefits and Tradeoffs



# Say hello to **Einstein Platform**

## **Einstein Predictive Vision API is now Einstein Platform**

- Existing Predictive Vision will be GA in WI18
- Language APIs (Beta in WI18)
  - Sentiment
  - Intent

## **More on the roadmap**

- Vision Enhancements: Object Recognition for Vision (SP18)
- Language Enhancements:
  - OCR & Entity Recognition (SP18)
  - Questions / Answers (SP18)
  - Summarization (SU18)

**Safe harbor!**

I totally don't know what is  
going to happen, when it is (or  
not) going to happen

¬\\_ (ツ) \\_ /¬



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Texei

# “Hey Einstein! Thank you for making my CRM even greater!”

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## Getting Started with Einstein Language APIs

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# What does it do?

## Sentiment

Can help predicting the emotion and feeling that a text sample expresses.

I'm really angry about it!

label=negative,  
probability=0.70076114

## Intent

Can help identifying what a text sample is about.

Where can I find the tracking code for my order?

label=Shipping Info,  
probability=0.58010371

# What can it be used for?

Text based interactions with humans, e.g. Email to Case & Web to Lead

- Route by **INTENT** to queues
  - Identifying relevant product by **INTENT** and assign
  - Prioritize / escalate by **SENTIMENT**
- Segment a single inbound queue into more granular queues

Other use cases could include

Distant reading of Social Posts, Emails, Case Comments, Chatter posts:  
Identify opinion leaders and influencers by **Sentiment**.

# Implement René Winkelmeyers Einstein Library


Instantiate Einstein\_PredictionService – that's all!




```
Einstein_PredictionService service = new Einstein_PredictionService(  
    Einstein_PredictionService.Types.SENTIMENT);  
Einstein_PredictionResult prediction = service.predictSentiment(  
    'CommunitySentiment', s, 0, '');
```




# Create Examples, build a Dataset, train your Model

Build and Use the Einstein Admin component






 French Touch Demo

Chatter

Leads ▾

Cases ▾

Einstein Admin

 Einstein Admin

ZIP file url:  

Create Dataset

DATASET NAME	DATASET LABELS	DATASET MODELS	ACTIONS
case_routing_intent.csv	Plain (77) Complex (73)		<div>Train</div> <div>Delete</div>
MusicSamples.csv	Plain (77) Complex (73)		<div>Train</div> <div>Delete</div>
MusicSamples.csv	Plain (77) Complex (73)		<div>Train</div> <div>Delete</div>
ComplexPlain.csv	Plain (77) Complex (73)		<div>Train</div> <div>Delete</div>





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# Demo

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Ask Einstein yourself at <http://bit.ly/einstein-ftd17>



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# Predicting a sentiment

Using the prebuild “CommunityIntentModel”



o **Daniel Stange** <daniel.stange@salesf

4:50 PM (0 minutes ago) ☆



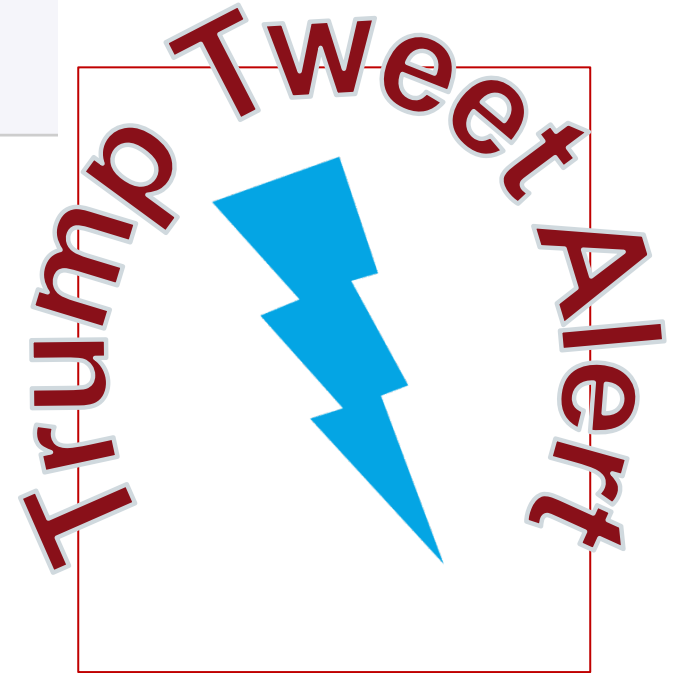
to o einstein ▾



☁ Add to Salesforce



I am very disappointed in China. Our foolish past leaders have allowed them to make hundreds of billions of dollars a year in trade





Search Cases and more...



French Touch Demo

Chatter

Leads

Cases

Einstein Admin



CASES

Einstein Cases

New

15 items • Sorted by Case Number • Updated a few seconds ago



	CASE NUMBER ↓	SUBJECT	STATUS	SENTIMENT	INTENT	MUSIC	LANGUAGE
1	00001050	Disappointment	New		Sales Opportunity	Slayer	
2	00001049	Some	New		Sales Opportunity	Black Eyed Peas	
3	00001048	CRM	New		Sales Opportunity	Michael Jackson	
4	00001047	What's up	New		Shipping Info	Black Eyed Peas	
5	00001046	Re: Thank you so m...	New		Order Change	Black Eyed Peas	
6	00001045	Just random chatting	New		Shipping Info	Michael Jackson	
7	00001044	AI Training - Awful J...	New		Sales Opportunity	Slayer	
8	00001043	Good morning!	New		Sales Opportunity		



## Description

I am very disappointed in China. Our foolish past leaders have allowed them to make hundreds of billions of dollars a year in trade



## ▼ Einstein Platform

### Sentiment



### Sentiment

negative



### Confidence

0,623623300000000000



### Intent

Sales Opportunity



### Intent Confidence

0,62

### Music

Slayer



### Complex Language



### Language



### Einstein Results:



Language complexity: Complex  
0.97711986

Sentiment: negative 0.6236233

Intent: Sales Opportunity

0.62084854

Sentiment: Slayer 0.5396445



# The No.1 Music Recommendation Service

Find music that matches your writing patterns.

Tell us a bit about yourself and we will prepare a music recommendation for you that will be sent via email.

First Name

Daniel

Last Name

Stange

Email

daniel.stange@gmail.com

Company

Company Name

Write something that allows us to find matching music

So they came into the outway  
It was Sunday - what a black day  
Mouth to mouth

Send your request and get a music prediction



LEAD  
Daniel Stange



Predicted

Closed - Not Converted

Name

Daniel Stange



Company

[nicht vorhanden]



Email

daniel.stange@gmail.com



Lead Status

Predicted



✓ Provided Message

Description

So they came into the outway  
It was Sunday - what a black day  
Mouth to mouth  
Resuscitation  
Sounding heartbeats - intimidation



Matching Music



# Do you like Rihanna?

Posteingang x



o **Albert über** jrei7w2dx2xy.0y-ad66uaa.eu1

17:01 (vor 1 Minute) ☆



an o daniel.stange ▾



Add to Salesforce



Tracking



Englisch ▾



Deutsch ▾

[Nachricht übersetzen](#)

[Deaktivieren für: Englisch](#) x

Dear Daniel Stange,

you asked me to make a music recommendation based on:

"So they came into the outway  
It was Sunday - what a black day  
Mouth to mouth  
Resuscitation  
Sounding heartbeats - intimidation"

I can only choose from five artists, so the choice is really limited. But the one that matches best is Rihanna.







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far beyond system integration



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# Demo

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Ask Einstein yourself at <http://bit.ly/einstein-ftd17>

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@stangomat

# From Natural Language Processing to Conversational Service

- Any written (or spoken and transcribed) input from people in natural language is **unstructured data** that can be analyzed
- Get a hint **WHY** someone is addressing you and **WHAT** she wants to achieve

## Benefits:

- Get a hint of **urgency and mood** more easily
- Shift from **close reading** at all stages to **distant reading** at most stages
- Understand how closely **patterns** of text matches pre-trained examples

# Understanding what it “really” does

- NLP mathematically describes how closely some text **compares to patterns** found in pre-classified examples
- Even the strongest polarity won't ever return a completely unambiguous response.

## Remember: The largest price tag is on effort and time

- Precision depends upon your datasets and model
- The more you invest upfront (example data, training, re-training and corrections), the better the results
- Classifiers start from 30 samples per label, but precision requires several 100s and constant feedback / re-training.

# Models for Einstein Language

- Einstein Platform is designed for text in English
- Pre-Trained Models work in English only
- Training Models in other languages is tedious

Intent	Supported Languages	Sentiment
Custom	English	<b>Pre-Built</b> Community Model (Start Here for Out of the Box Success)
Custom	<b>Other Languages</b> (not officially supported)	Custom

# A few words about bias

- Be aware that your examples will always have a bias
- ... therefore you will not just train the patterns you see
- ... but you'll train the bias as well

→ Diversify \* Diversify \* Diversify your examples

# Einstein AI pros and cons

- Einstein Platform API exposes CRM related NLP bouquets (**pro**)
- .... But that's all: Competition offers a more feature complete / analytical NLP (**con**)
- Easy to implement
  - JWT authentication
  - well-formed REST API
  - Excellent source code in Trailhead and GitHub
- Geared at Salesforce / Heroku Integration

# Try it out

- Do the „Cat Rescue App“ Project on Trailhead
- Install and Examine René Winkelmeyer's source code:  
[github.com/muenzpraeger/salesforce-einstein-platform-apex](https://github.com/muenzpraeger/salesforce-einstein-platform-apex)
- Collect examples
- Train your model
- Be creative – it's good fun for explorers
- Know what you're doing and what it does

## Bonus Prediction

„ Customers who purchase our services should make their purchase decisions based upon features that are currently available.“

[label=neutral,  
probability=0.991796]







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absi  
far beyond system integration

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## Q & A

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**Sample Code & Slides:** [https://github.com/dstdia/einstein\\_language](https://github.com/dstdia/einstein_language)

**Twitter:** @stangomat

Try it out: <http://bit.ly/einstein-ftd17>

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# Thank You

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Remember to tell us what you think in the event survey  
[www.frenchtouchdreamin.com/survey/](http://www.frenchtouchdreamin.com/survey/)

First Name Last Name  
Title of Presenter  
email@salesforce.com  
@twitterhandle