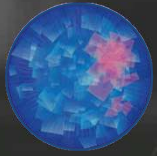


oneprediction.ai



**ONE**  
PREDICTION

Increase Response and Conversion

Powered by AI and Machine Learning



DataRobot



Google Cloud Platform



IBM Watson

Make more relevant communication happen,  
in an ever-changing world of data and technology.



**L'EASY**



**Aller**



**BØRNEfonden**



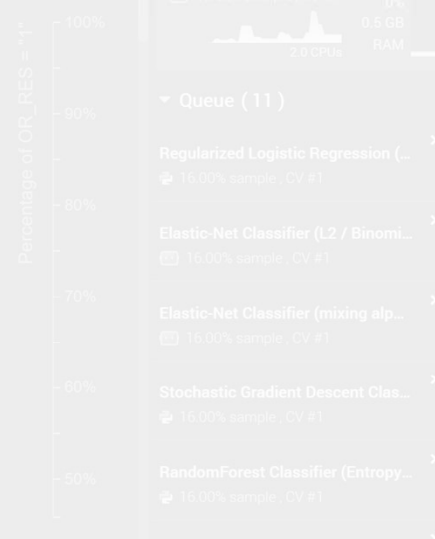
# The need for personalization



**ONE**  
PREDICTION

Feature Name	Count	Type	Std Dev	Median	Min	Max
CT	17	Numeric	13,833	161,356	0.18	0.31
OF_KW_TDIF	9	Numeric	72,491	62,822	0.05	0.05

Showing 59 bins Calculate outliers Export



9/10 customers expect personalized communication

Only 14% of companies rate themselves as strong in personalization

Organizations that fully invest in online personalization will outsell those that haven't by > 30%

Processing (2)

- Nystroem Kernel SVM Classifier (16.00% sample, CV #1) 0% 0.8 GB RAM 1.1 CPU
- Generalized Additive2 Model (BP43) (16.00% sample, CV #1) 0% 0.5 GB RAM 2.0 CPU

Queue (11)

- Regularized Logistic Regression (16.00% sample, CV #1)
- Elastic-Net Classifier (L2 / Binomi... (16.00% sample, CV #1)
- Elastic-Net Classifier (mixing alp... (16.00% sample, CV #1)
- Stochastic Gradient Descent Clas... (16.00% sample, CV #1)
- RandomForest Classifier (Entropy... (16.00% sample, CV #1)
- ExtraTrees Classifier (Gini) (57) (16.00% sample, CV #1)

Errored (2)

- Extreme Gradient Boosted Trees (16.00% sample, CV #1)



Feature Name	Unique	Missing	Mean	Std Dev	Median	Min	Max
CT_KW_TDIF	13,833	161,356	0.18	0.31	0.04	5.63e-4	1
OF_KW_TDIF	72,491	62,822	0.05	0.05	0.04	4.62e-4	1

# The Beginning



Showing 59 bins Calculate outliers Export



- Find out how AI and Machine Learning could help our Customers to move to the next level of Marketing Automation
- Pilot Project with DR Koncerthuset

Processing (2)

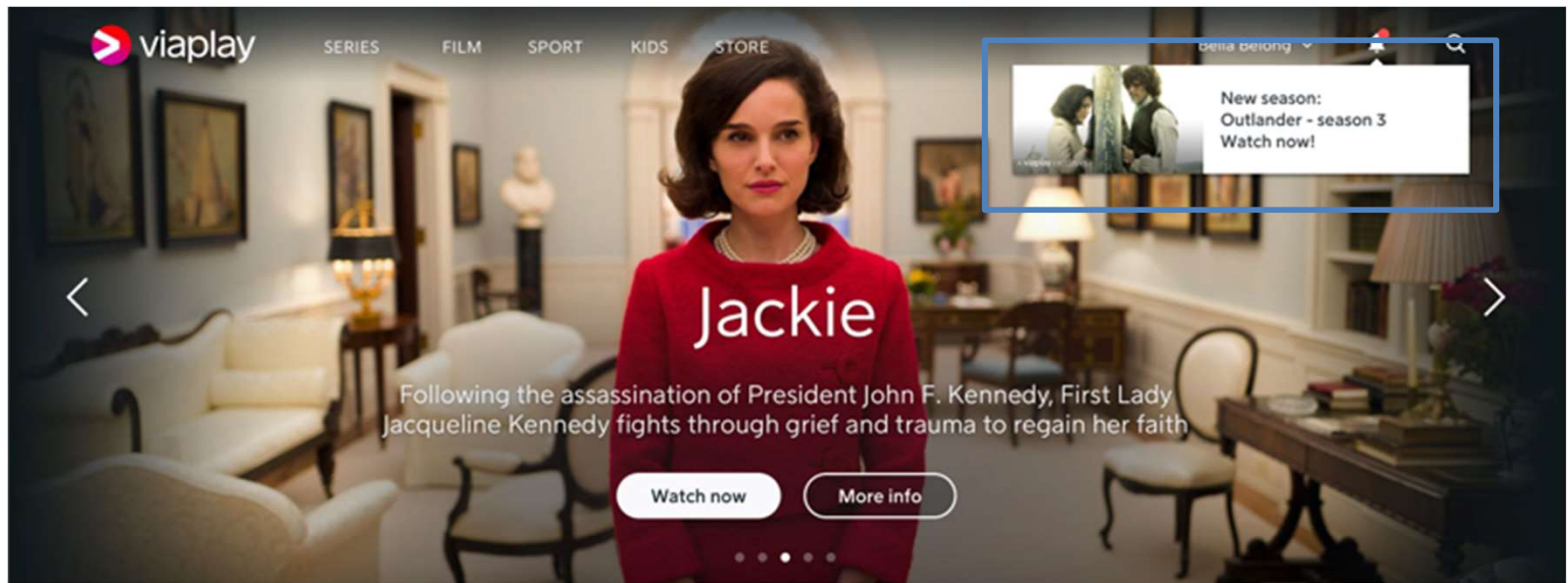
- Nystroem Kernel SVM Classifier (16.00% sample, CV #1) 0% 0.8 GB RAM 1.1 CPU
- Generalized Additive2 Model (BP43) (16.00% sample, CV #1) 0% 0.5 GB RAM 2.0 CPU

Queue (11)

- Regularized Logistic Regression (16.00% sample, CV #1)
- Elastic-Net Classifier (L2 / Binomi) (16.00% sample, CV #1)
- Elastic-Net Classifier (mixing alp) (16.00% sample, CV #1)
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- RandomForest Classifier (Entropy) (16.00% sample, CV #1)
- ExtraTrees Classifier (Gini) (57) (16.00% sample, CV #1)

Errored (2)

- eXtreme Gradient Boosted Trees (16.00% sample, CV #1)

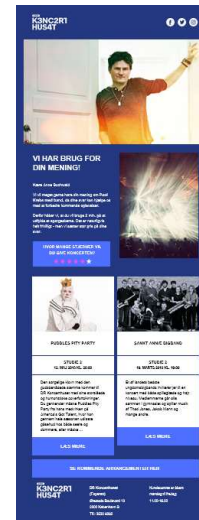


“In Product Communication” for the series “Outlander”



# Segmented flows today

Genre specific communication based on transactions and Customer profile





# Issue#1: how to differentiate events?



=



=



	Var Type	Unique	missing	Mean
	Numeric	2	0	0.50
	Numeric	101,350	7,565	19.56
	Numeric	72,707	71,116	27.59
	Numeric	81,601	51,388	11.78
	Numeric	54,877	101,722	18.26
	Numeric	105	0	0.90
	Numeric	641	0	61,509
	Numeric	25	0	0.50
	Numeric	9,182	0	189,893
	Numeric	104	0	0.79
	Numeric	3,833	161,356	0.18
	Numeric	2,491	62,822	0.05
	Numeric	15,395	94,332	0.11
	Numeric	9,652	168,539	0.27
	Numeric	20,413	151,275	0.15
	Numeric	15	0	0.13
	Numeric	15,746	161,356	2.64
	Numeric	18	0	0.20
	Numeric	11,342	170,633	4.08
	Numeric	15,998	157,763	0.24







## Issue#2: how to differentiate customers in the same segment?



=



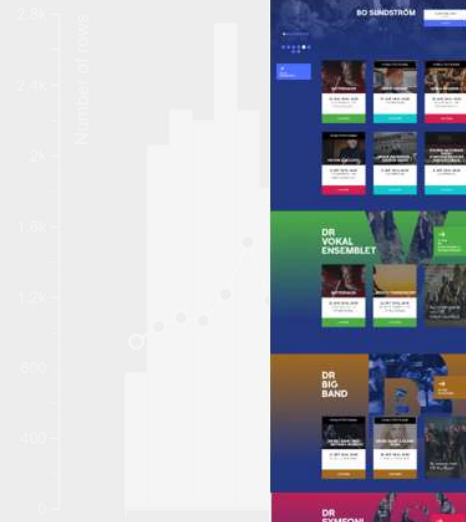
	Var Type	Unique	missing	Mean
	Numeric	2	0	0.50
	Numeric	101,350	7,565	19.56
	Numeric	72,707	71,116	27.59
	Numeric	81,601	51,388	11.78
	Numeric	54,877	101,722	18.26
	Numeric	105	0	0.90
	Numeric	641	0	61,509
	Numeric	25	0	0.50
	Numeric	99,182	0	189,893
	Numeric	104	0	0.79
	Numeric	13,833	161,356	0.18
	Numeric	72,491	62,822	0.05
	Numeric	55,395	94,332	0.11
	Numeric	9,652	168,539	0.27
	Numeric	20,413	151,275	0.15
	Numeric	15	0	0.13
	Numeric	15,746	161,356	2.64
	Numeric	18	0	0.20
	Numeric	11,342	170,633	4.08
	Numeric	15,998	157,763	0.24



Feature Name	Var Type	Unique	Missing	Mean	Std Dev	Median	Min	Max
CT_KW_TDIF	Numeric	13,833	161,356	0.18	0.31	0.04	5.63e-4	1

# The goal

Showing 59 bins Calculate outliers Export



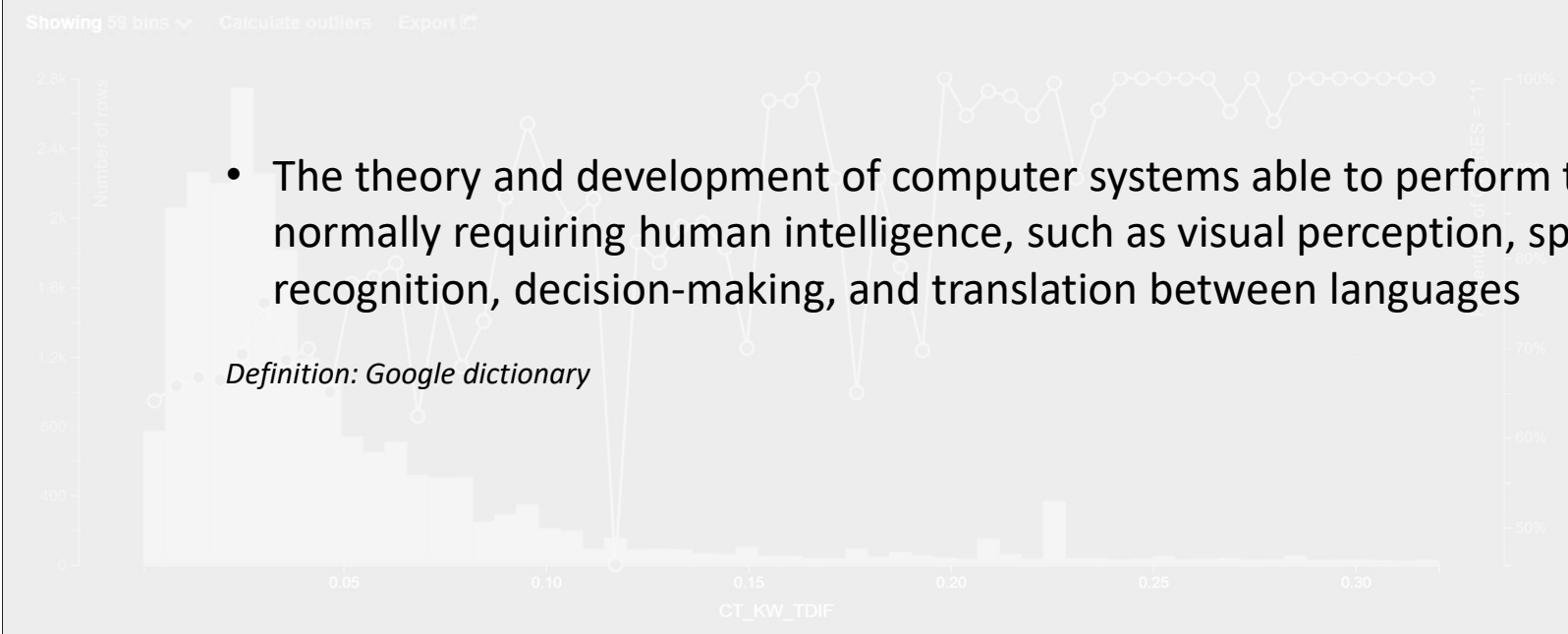
Web site

E-mails

SoMe: Facebook and Instagram

# Artificial Intelligence

Feature Name	Count	Var Type	Mean	Std Dev	Median	Min	Max
CT_KW_TDIF	17	Numeric	13,833	161,356	0.18	0.31	0.04
OF_KW_TDIF	9	Numeric	72,491	62,822	0.05	0.05	0.04



- The theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages

Definition: Google dictionary

Processing (2)

- Nystroem Kernel SVM Classifier (16.00% sample, CV #1) 0% RAM
- Generalized Additive2 Model (BP43) (16.00% sample, CV #1) 0% RAM

Queue (11)

- Regularized Logistic Regression (16.00% sample, CV #1)
- Elastic-Net Classifier (L2 / Binomi) (16.00% sample, CV #1)
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- RandomForest Classifier (Entropy) (16.00% sample, CV #1)
- ExtraTrees Classifier (Gini) (57) (16.00% sample, CV #1)

Errored (2)

- eXtreme Gradient Boosted Trees (16.00% sample)



DataRobot Data Models Insights Jupyter Repository Rhythmic Workers: 002

Menu Q Search Feature List Rhythmic View Raw Data 1-50 of 78

# Machine learning

Feature Name	Missing	Mean	Std Dev	Median	Min	Max
CT_KW_TDIF	17	0.18	0.31	0.04	5.63e-4	1
OF_KW_TDIF	9	0.05	0.05	0.04	4.62e-4	1

ONE PREDICTION

Showing 59 bins Calculate outliers Export

Number of rows

- Machine learning is a subset of artificial intelligence in the field of computer science that often uses statistical techniques to give computers the ability to "learn" (i.e., progressively improve performance on a specific task) with data, without being explicitly programmed.

Definition: Wikipedia

RhythmicTraining (1).gz Total features: 167 Datasets: 230 (1)

Processing (2)

- Nystroem Kernel SVM Classifier (16.00% sample, CV #1) 0% 0.8 GB RAM 1.1 CPU
- Generalized Additive2 Model (BP43) (16.00% sample, CV #1) 0% 0.5 GB RAM 2.0 CPU

Queue (11)

- Regularized Logistic Regression (16.00% sample, CV #1)
- Elastic-Net Classifier (L2 / Binomi... (16.00% sample, CV #1)
- Elastic-Net Classifier (mixing alp... (16.00% sample, CV #1)
- Stochastic Gradient Descent Clas... (16.00% sample, CV #1)
- RandomForest Classifier (Entropy... (16.00% sample, CV #1)
- ExtraTrees Classifier (Gini) (57) (16.00% sample, CV #1)

Errored (2)

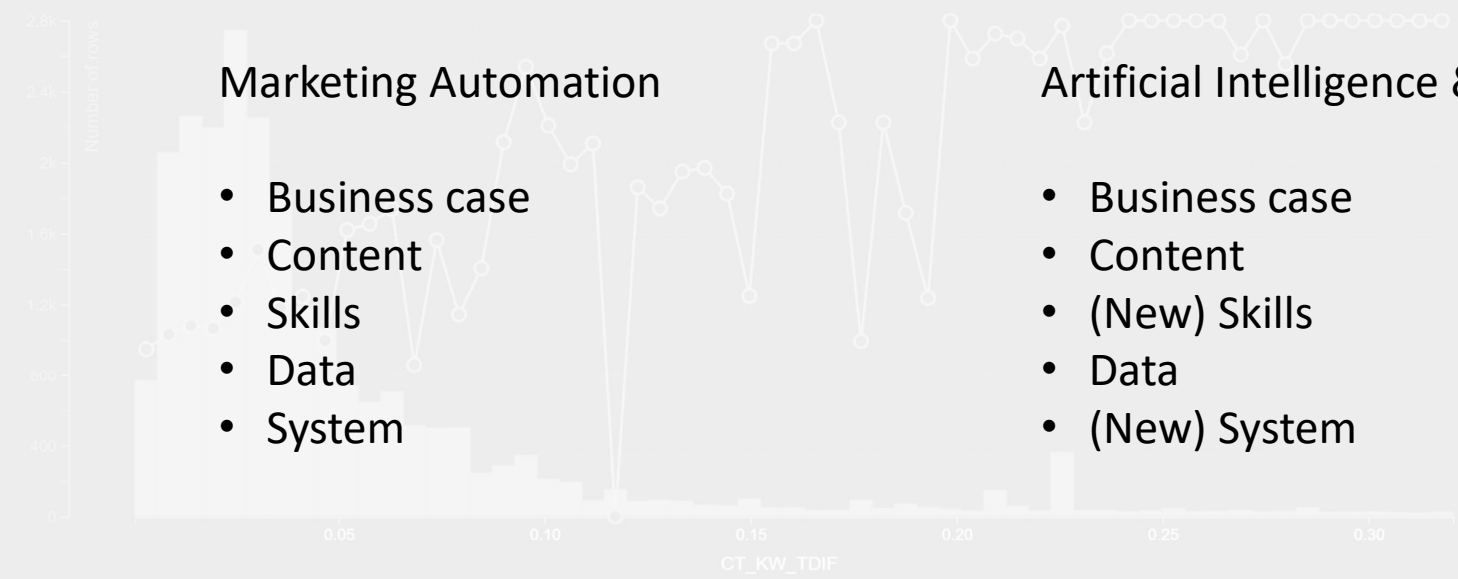
- eXtreme Gradient Boosted Trees (16.00% sample)

Feature Name	Unique	Missing	Mean	Std Dev	Median	Min	Max
CT_KW_TDIF	13,833	161,356	0.18	0.31	0.04	5.63e-4	1
OF_KW_TDIF	72,491	62,822	0.05	0.05	0.04	4.62e-4	1

# Key to success



Showing 59 bins Calculate outliers Export



## Marketing Automation

- Business case
- Content
- Skills
- Data
- System

## Artificial Intelligence & Machine learning

- Business case
- Content
- (New) Skills
- Data
- (New) System

Processing (2)

- Nystroem Kernel SVM Classifier (16.00% sample, CV #1) 0% RAM
- Generalized Additive2 Model (BP43) (16.00% sample, CV #1) 0% RAM
- Queue (11)
- Regularized Logistic Regression (16.00% sample, CV #1)
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- ExtraTrees Classifier (Gini) (57) (16.00% sample, CV #1)
- Errored (2)
- eXtreme Gradient Boosted Trees ... (16.00% sample)

DataRobot Data Models Insights Jupyter Repository Rhythmic Workers: 002

Menu Search Feature List Rhythmic View Raw Data 1-50 of 78

# ONE Prediction cloud service

Feature Name: CT\_KW\_TDIF 17 Numeric 13,833 161,356 0.18 0.31 0.04 5.63e-4 1

ONE PREDICTION

Showing 59 bins Calculate outliers Export

- ONE Prediction enables marketing teams to build and automate advanced prediction models - through AI and machine learning - regardless of data science skill-level, in a fraction of the time and costs that it would take with traditional methods.

Feature Name	Count	Var Type	Min	Max	Mean	Std Dev	Median	Min	Max
CT_KW_TDIF	13,833	Numeric	161,356	0.18	0.31	0.04	5.63e-4	1	
OF_KW_TDIF	72,491	Numeric	62,822	0.05	0.05	0.04	4.62e-4	1	

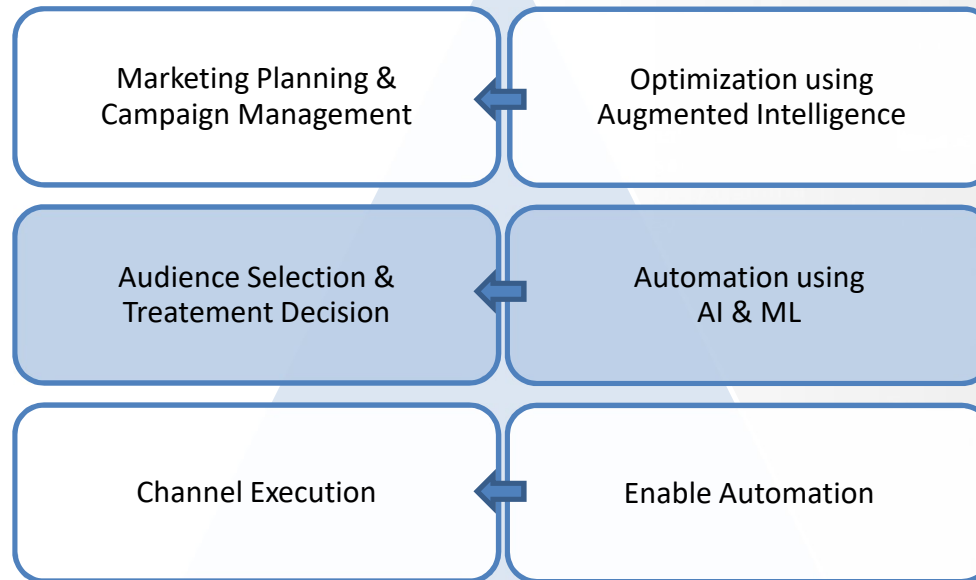
RhythmicTraining (1).gz Total Features: 167 Data Points: 230,016

Processing (2)

- Nystroem Kernel SVM Classifier (16.00% sample, CV #1) 0% 0.8 GB RAM 1.1 CPU
- Generalized Additive2 Model (BP43) (16.00% sample, CV #1) 0% 0.5 GB RAM 2.0 CPU
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- Stochastic Gradient Descent Clas... (16.00% sample, CV #1)
- RandomForest Classifier (Entropy... (16.00% sample, CV #1)
- ExtraTrees Classifier (Gini) (57) (16.00% sample, CV #1)
- Errored (2)
- IBM Watson eXtreme Gradient Boosted Trees (16.00% sample)

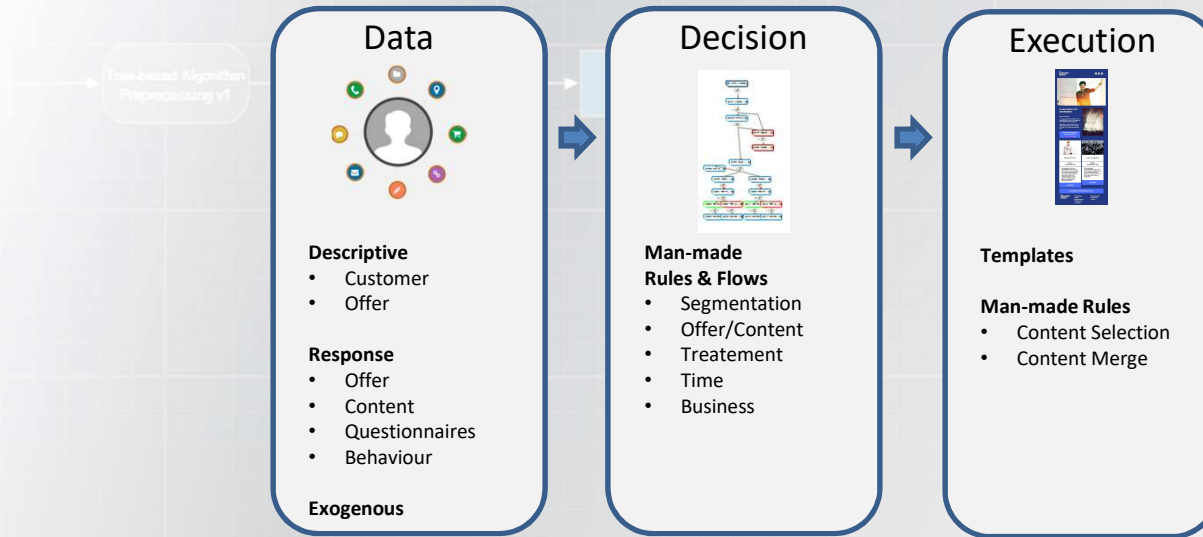


## Our focus



# Marketing Automation

How it is done today



Data Science Skills: Necessary  
 User Complexity: High  
 Maintenance: Resource demanding  
 Accuracy: Low





What are the MOST SIGNIFICANT BARRIERS to marketing automation success?



Marketing Automation Trends Survey, Three Deep and Ascend2, April 2016

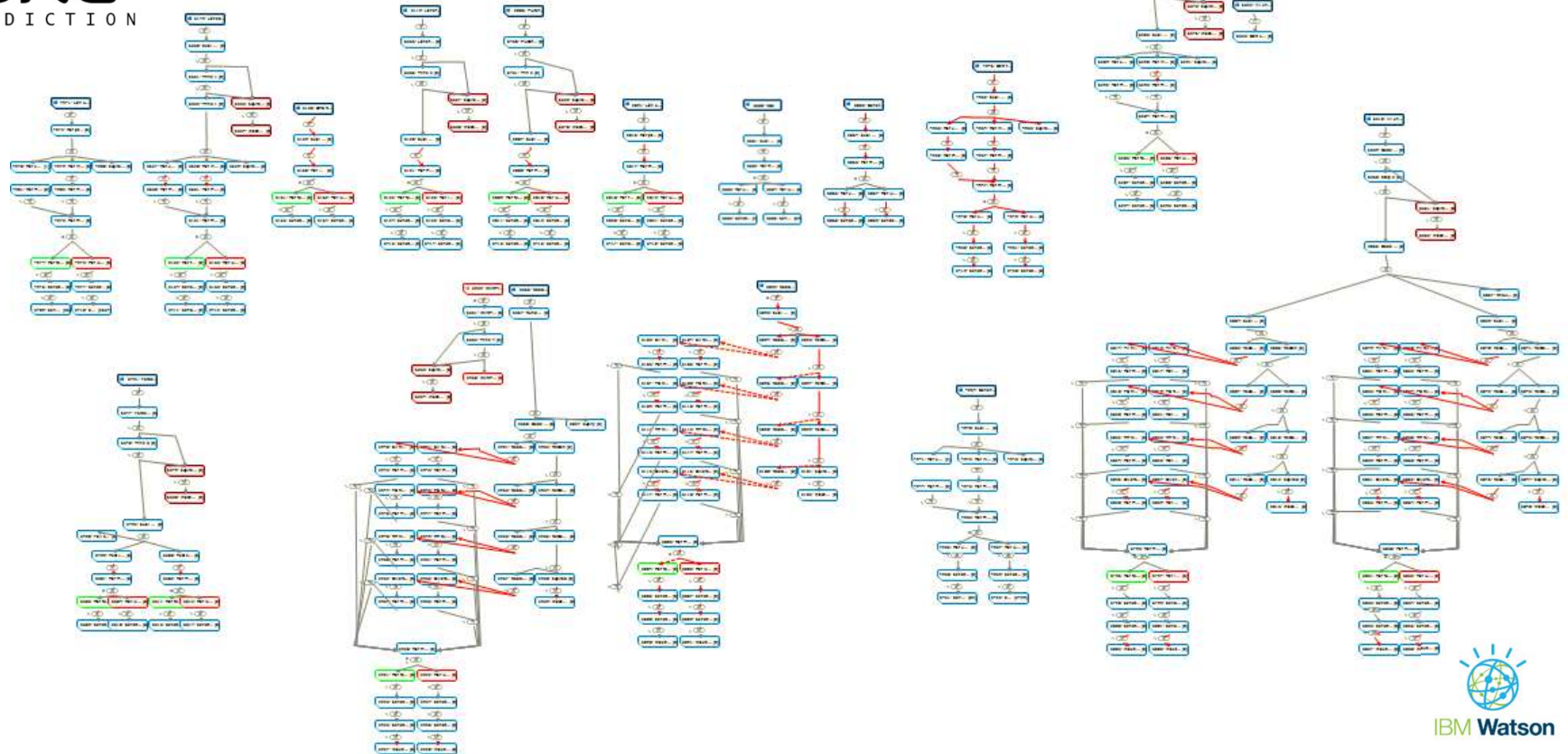
This survey was conducted online from a panel of more than 50,000 professionals (88% representing management)

Processing (31)

- Stream Kernel SVM Classifier  
16.00% sample, CV #1  
4% CPU, 8.7 GB RAM
- Gradient Boosted Trees  
16.00% sample, CV #1  
3% CPU, 8.3 GB RAM
- Deep Learning Classifier  
16.00% sample, CV #1  
6% CPU, 14.8 GB RAM
- Neural Network Classifier  
16.00% sample, CV #1  
4% CPU, 8.7 GB RAM
- Random Forest Classifier  
16.00% sample, CV #1  
4% CPU, 8.7 GB RAM

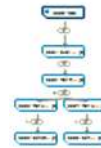


# Segment and Offer Retention Flow





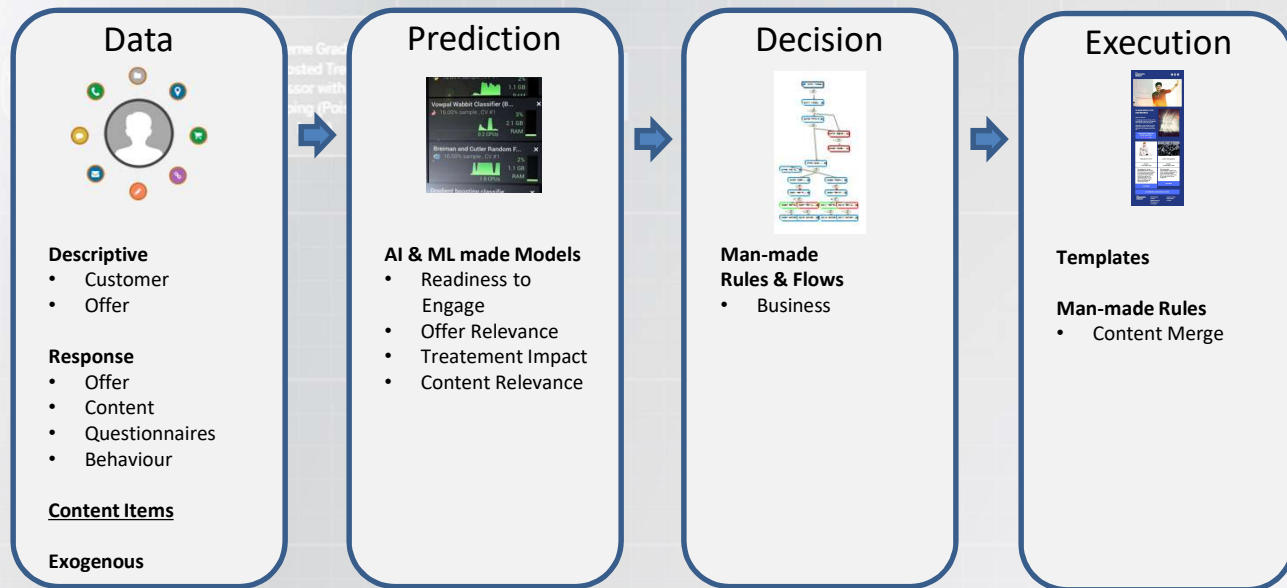
## Segment and Offer Retention Flow





# Marketing Automation

How it is done with ONE Prediction



Data Science Skills: No need  
User Complexity: Low  
Maintenance: Automated  
Accuracy: High



**DR**

# K3NC2R1 HUS4T



**ONE**  
PREDICTION

**ONE**  
MARKETING

## The future – where do we want to go?

Challenge:

High variation of events and customers

Staying relevant

Keep increasing response and engagement



### Personalized communication

Customer specific trigger based dialogue

Enrichment of customer data

Personalization on SOME

Personalization of website

Personalization of emails

Tracking of customer behavior in all channels



# Classic Newsletter 20. Aug 2018



#1: 5.351



#1: 1.787



#1: 689



#1: 1.121

7  
Alternative offers



#1: 6.236

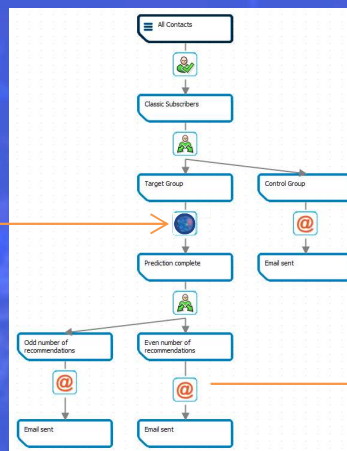


#1: 1.525



#1: 1.446

22.785  
Classic Newsletter  
subscribers



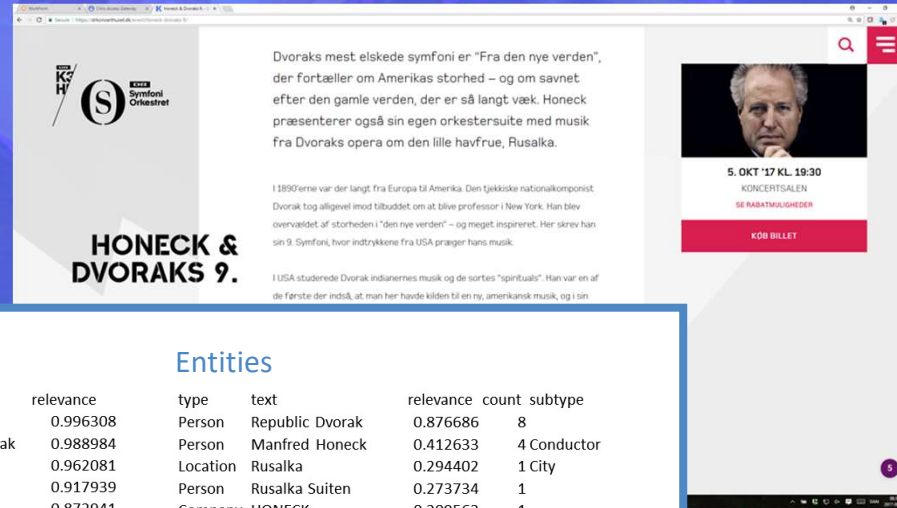
2.582  
e-mail variants



159.495  
Offer Relevance  
Predictions

# Use of Image & Natural Language Analysis (AI)

Used for Cognitive Profiling & Matching and having +70% Impact on the model

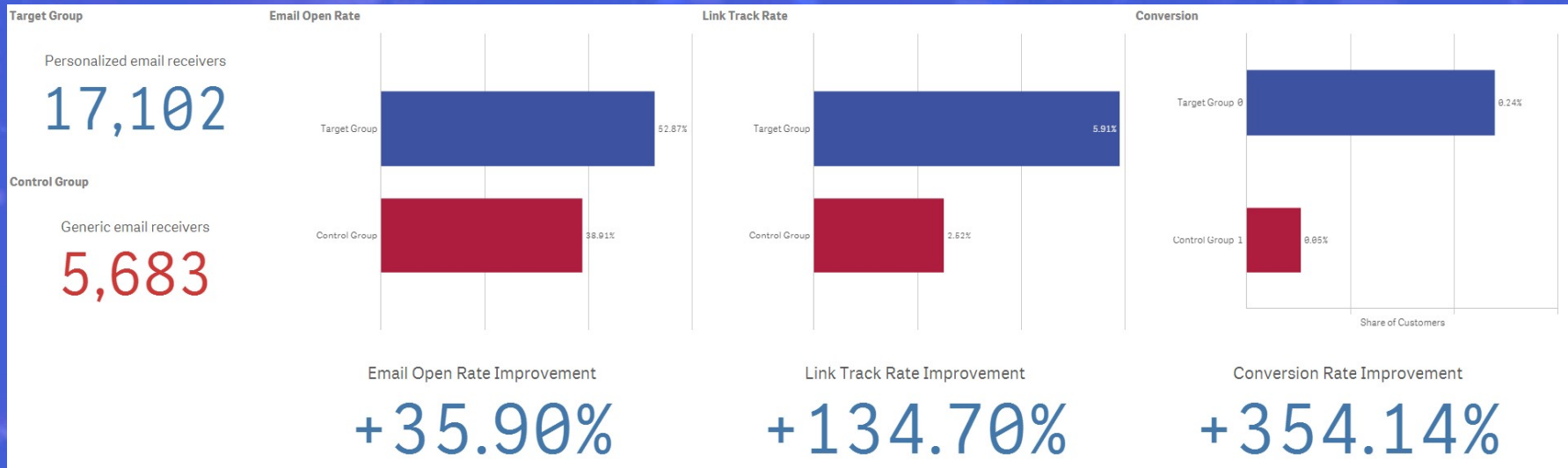


Concept		Keywords		Entities				
text	relevance	text	relevance	type	text	relevance	count	subtype
Antonin Dvorak	0.983279	Dvorak	0.996308	Person	Republic Dvorak	0.876686	8	
Opera	0.839302	national composer Dvorak	0.988984	Person	Manfred Honeck	0.412633	4	Conductor
Ludwig van Beethoven	0.80742	Dvorak Indian music	0.962081	Location	Rusalka	0.294402	1	City
Robert Schumann	0.712243	Czech Republic Dvorak	0.917939	Person	Rusalka Suiten	0.273734	1	
Orchestra	0.680637	New World	0.872941	Company	HONECK	0.209563	1	
Richard Strauss	0.632603	little mermaid	0.72503	Person	Lieder	0.187827	2	
The Little Mermaid	0.626565	Dvorak arr	0.706953	Location	America	0.186761	2	Continent
United States	0.621617	conductor Manfred Honeck	0.665803	Person	Paul Armin Edelmann	0.1852	1	
		orchestra suite	0.653769	Location	New York	0.181561	1	PoliticalDistrict
		Paul Armin Edelmann	0.637542	Location	USA	0.171053	2	Region
		new American music	0.628229	Person	Richard Strauss	0.162737	1	Composer
		Rusalka	0.601916	Person	Schubert	0.15137	1	
		opera Rusalka	0.587098	Location	Europe	0.148789	1	Continent
		Rusalka Suiten	0.575687	JobTitle	professor	0.142384	1	
		Rusalka Suite	0.566171	Person	Rusalkas	0.136238	1	
		symphony	0.522825	Location	Denmark	0.128297	1	Country



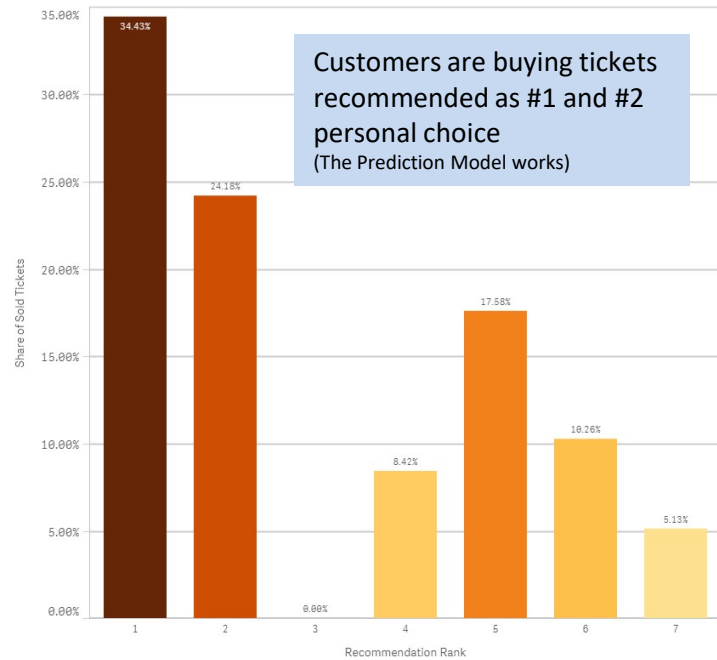


# Classic Newsletter 20. Aug 2018 - Response results

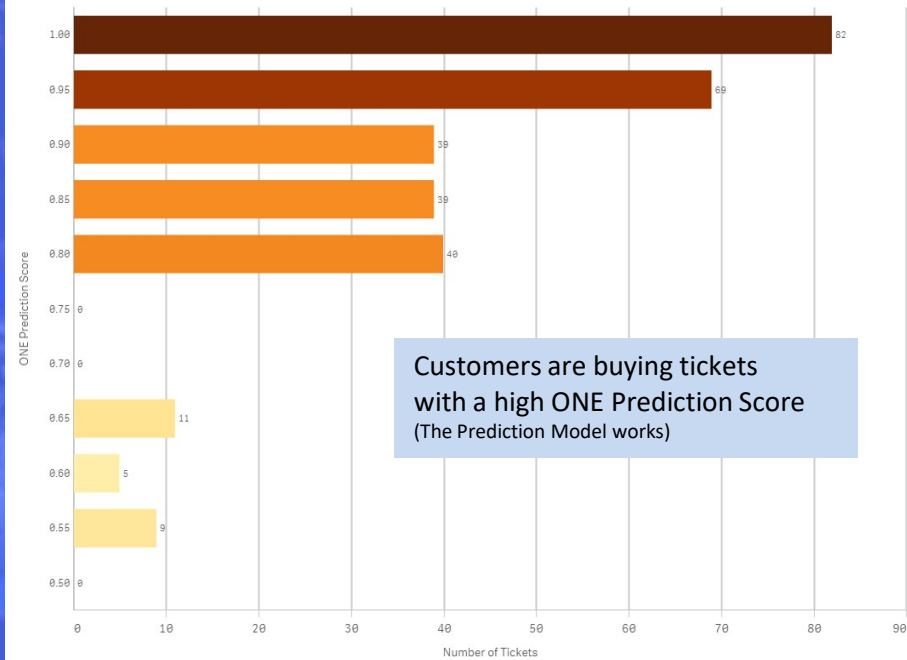


## Classic Newsletter 20. Aug 2018 - Recommendation results

Distribution of tickets by personal recommendation rank



Sold Tickets by ONE Prediction Score



## Next step in Q4: Personalized website

### Generic website



### Personalized website



Top banner based on highest purchase score = 1

Prioritized event based on purchase score = 2 - 5

Prioritized ensemble block based on affinity

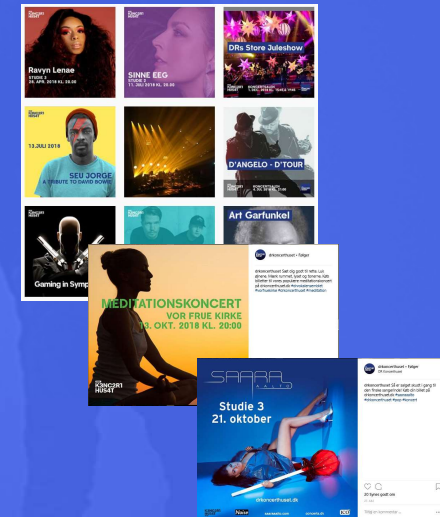
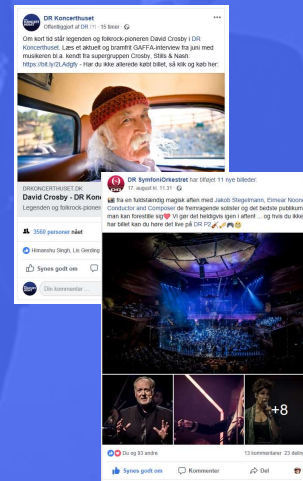
## Next step in Q4:

## Recommendation on existing flows and platforms and selections of target groups.

### Concert evaluations

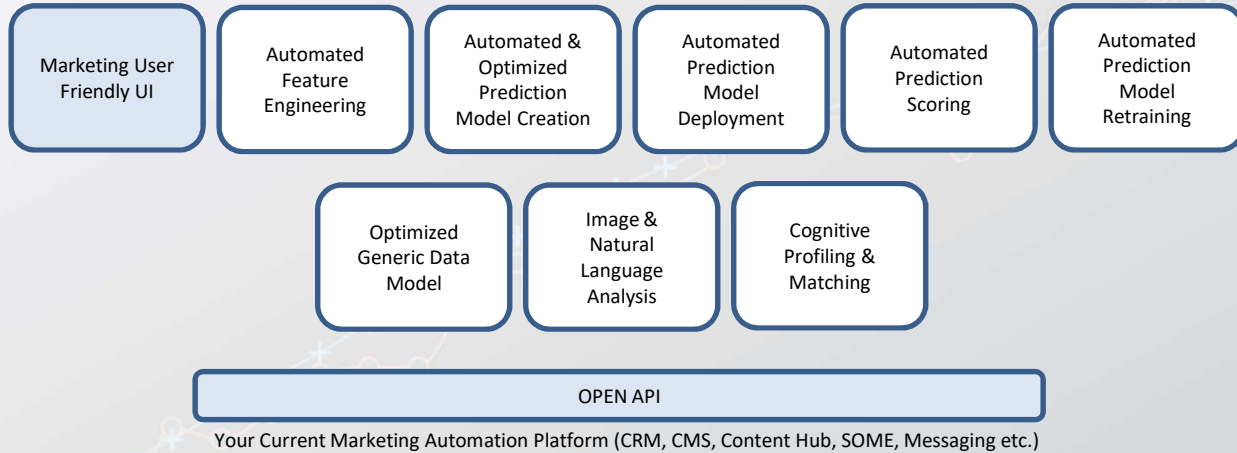
### Permissionsflows

### Facebook & Insta ads.



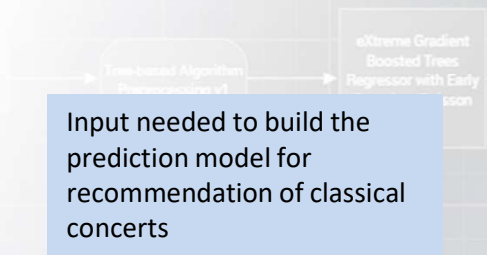


# Inside the box





# Marketing User Friendly UI (Prototype)



### Create Prediction Model

**Model Type:**  
Offer Relevance

**Offer Type:**  
Classical Concert

**Response Type:**  
Ticket Purchase

**Model History from:**  
01-01-2017

**Offer Response Match:**  
Classical Concert  
Jazz Concert  
Rhythmic Concert  
Entertainment Concert

**Content Response Match:**  
None  
E-mail tracking  
Web tracking

**Offer/Contact Attribute Match:**

	Match Value
Genre Groups	1
Event Classification	1
Ensembles	1

Start





## Customer Case: Bank - Ranking Leads

**Activity:** Calling low value B2C Customers with potential

**Succes**

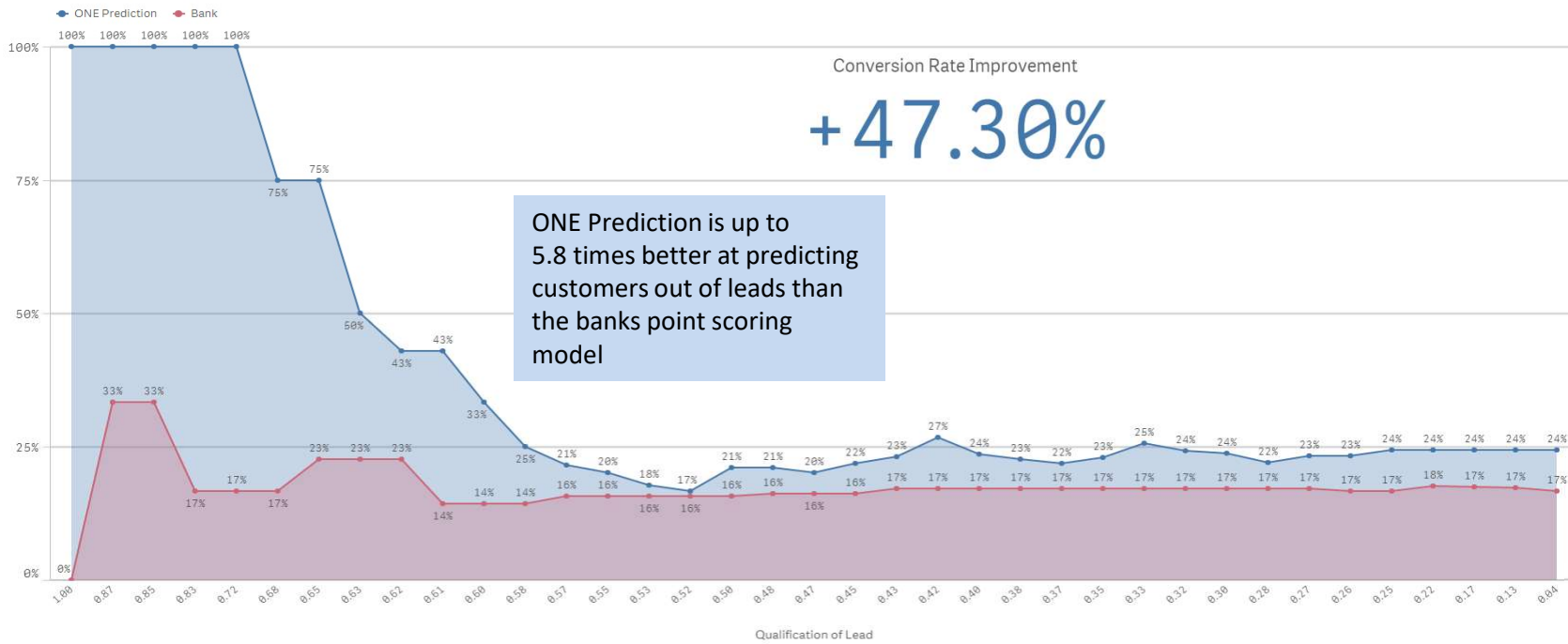
**Criteria:** Book meeting or upsell/cross-sell

**Test:** ONE Prediction versus  
Lead Scoring Point Model



# Customer Case: Bank - Ranking Leads

Achieved Success Rate during Call Activity







## Customer Case: Service Company - Ranking Leads

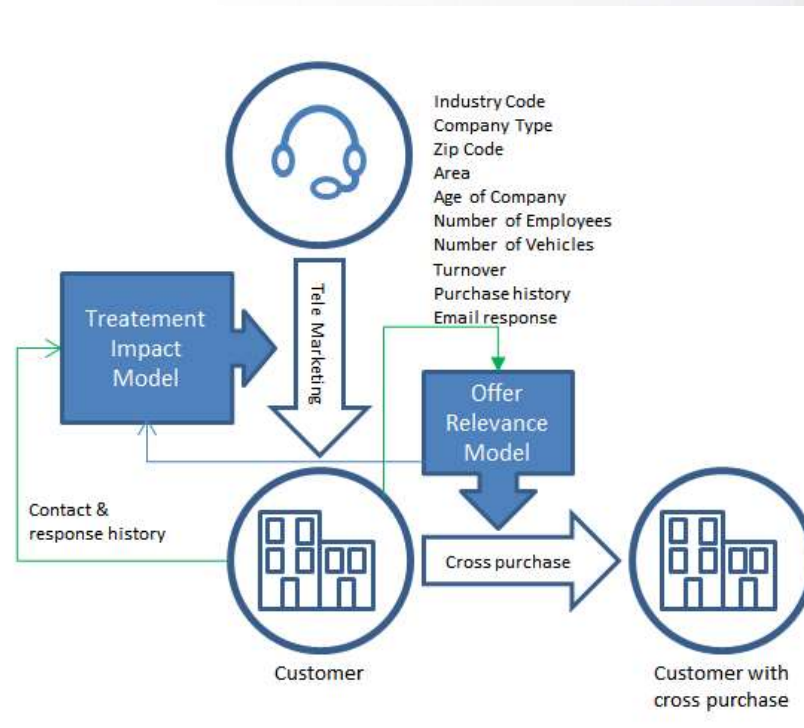
**Activity:** Calling Existing B2B Customers

**Success**

**Criteria:** Cross-sell

**Test:** ONE Prediction versus  
Experience Based Ranking

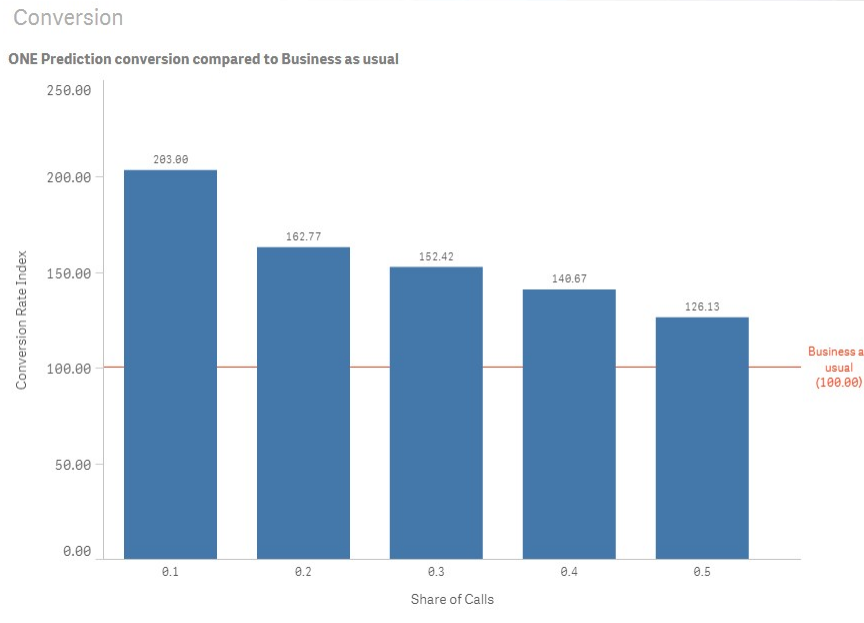
## Customer Case: Service Company - Ranking Leads



Very basic and existing data used for the prediction models.



## Customer Case: Service Company - Ranking Leads



ONE Prediction is up to 2 times better at predicting customers out of leads than the marketing peoples selecting and sorting criterias

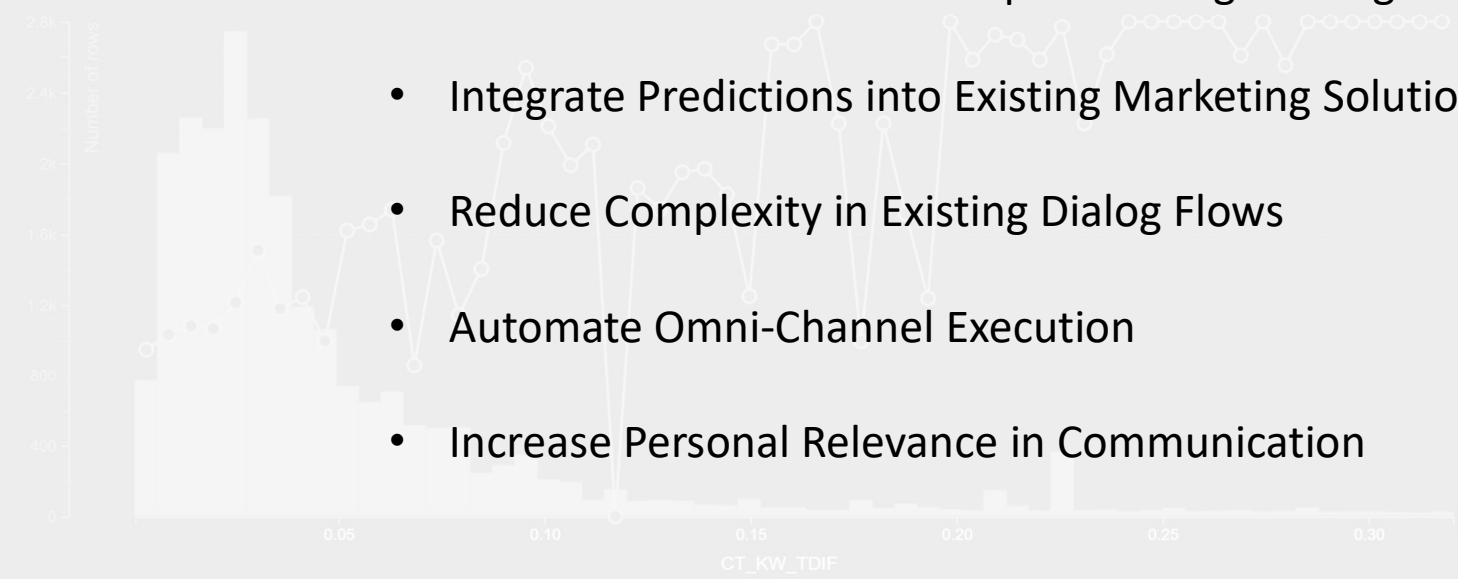
Feature Name	Index	Importance	Mean	Std Dev	Median	Min	Max
CT_KW_TDIF	17	0.18	13.833	0.31	0.04	5.63e-4	1



## Key Achievements

- Increase Conversion and Response using Existing Data
- Integrate Predictions into Existing Marketing Solution
- Reduce Complexity in Existing Dialog Flows
- Automate Omni-Channel Execution
- Increase Personal Relevance in Communication

Showing 59 bins Calculate outliers Export



Percentage of CR values > 1

OF_KW_TDIF	9	0.05	72.491	0.05	0.04	4.62e-4	1
------------	---	------	--------	------	------	---------	---

Processing (2)

- Nystroem Kernel SVM Classifier (16.00% sample, CV #1) 0% 0.8 GB RAM 1.1 CPUs
- Generalized Additive2 Model (BP43) (16.00% sample, CV #1) 0% 0.5 GB RAM 2.0 CPUs

Queue (11)

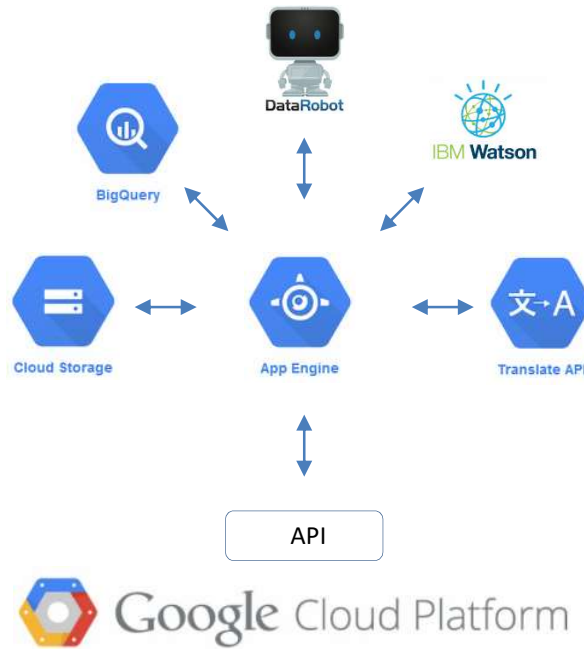
- Regularized Logistic Regression (16.00% sample, CV #1)
- Elastic-Net Classifier (L2 / Binomi... (16.00% sample, CV #1)
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- ExtraTrees Classifier (Gini) (57) (16.00% sample, CV #1)

Errored (2)

- eXtreme Gradient Boosted Trees (16.00% sample, CV #1)



## Technological Platform



Fully Managed Cloud Service

World Leading Technology

Secure


Scalable

GDPR Compliant



**DataRobot** Data Models Insights Jupyter Repository Rhythmic Workers: 002

Menu Q Search Feature List Rhythmic Raw Data 1-50 of 78

Feature Name:  **ONE PREDICTION**

Feature Name: CT\_KW\_TDIF 17 Numeric 13,833 161,356 0.18 0.31 0.04 5.63e-4 1

Showing 59 bins Calculate outliers Export

Number of rows

Percent of CR\_RES = "1"

CT\_KW\_TDIF

OF\_KW\_TDIF 9 Numeric 72,491 62,822 0.05 0.05 0.04 4.62e-4 1

RhythmicTraining (1).gz Total Features: 167 DataPoints: 230,016

Processing (2)


- Nystroem Kernel SVM Classifier (16.00% sample, CV #1) 0% 0.8 GB RAM 1.1 CPU
- Generalized Additive2 Model (BP43) (16.00% sample, CV #1) 0% 0.5 GB RAM 2.0 CPU

Queue (11)

- Regularized Logistic Regression (16.00% sample, CV #1)
- Elastic-Net Classifier (L2 / Binomi... (16.00% sample, CV #1)
- Elastic-Net Classifier (mixing alp... (16.00% sample, CV #1)
- Stochastic Gradient Descent Clas... (16.00% sample, CV #1)
- RandomForest Classifier (Entropy... (16.00% sample, CV #1)
- ExtraTrees Classifier (Gini) (57) (16.00% sample, CV #1)

Errored (2)

- eXtreme Gradient Boosted Trees (16.00% sample, CV #1)

 **IBM Watson**

## Qualify for a free Proof of Concept:

Send to [kim.gregersen@oneprediction.ai](mailto:kim.gregersen@oneprediction.ai)

- A short description of the business case, what do you want to achieve
- A short description of the data you have access to
- Your contact details

One case will be selected - others get a 25% discount at SEK 45.000

Menu Search Feature List Rhythmic View Raw Data

1-50 of 78

Feature Name	Index	Importance	Var Type	Unique	Missing	Mean	Std Dev	Median	Min	Max
CT_KW_TDIF	17		Numeric	13,833	161,356	0.18	0.31	0.04	5.63e-4	1

Histogram Frequent Values Table Var Type Transform

Showing 59 bins Calculate outliers Export



Percentage of CR\_PRES = "1"

OF_KW_TDIF	9		Numeric	72,491	62,822	0.05	0.05	0.04	4.62e-4	1
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RhythmicTraining (1).gz  
Total Features: 167, Datapoints: 230,016

Processing (2)

Nystroem Kernel SVM Classifier (...)  
16.00% sample, CV #1  
0%  
0.8 GB RAM  
1.1 CPU

Generalized Additive2 Model (BP43)  
16.00% sample, CV #1  
0%  
0.5 GB RAM  
2.0 CPU

Queue (11)

Regularized Logistic Regression (...)  
16.00% sample, CV #1

Elastic-Net Classifier (L2 / Binomi...  
16.00% sample, CV #1

Elastic-Net Classifier (mixing alp...  
16.00% sample, CV #1

Stochastic Gradient Descent Clas...  
16.00% sample, CV #1

RandomForest Classifier (Entropy...  
16.00% sample, CV #1

ExtraTrees Classifier (Gini) (57)  
16.00% sample, CV #1

Errored (2)

eXtreme Gradient Boosted Trees ...  
16.00% sample