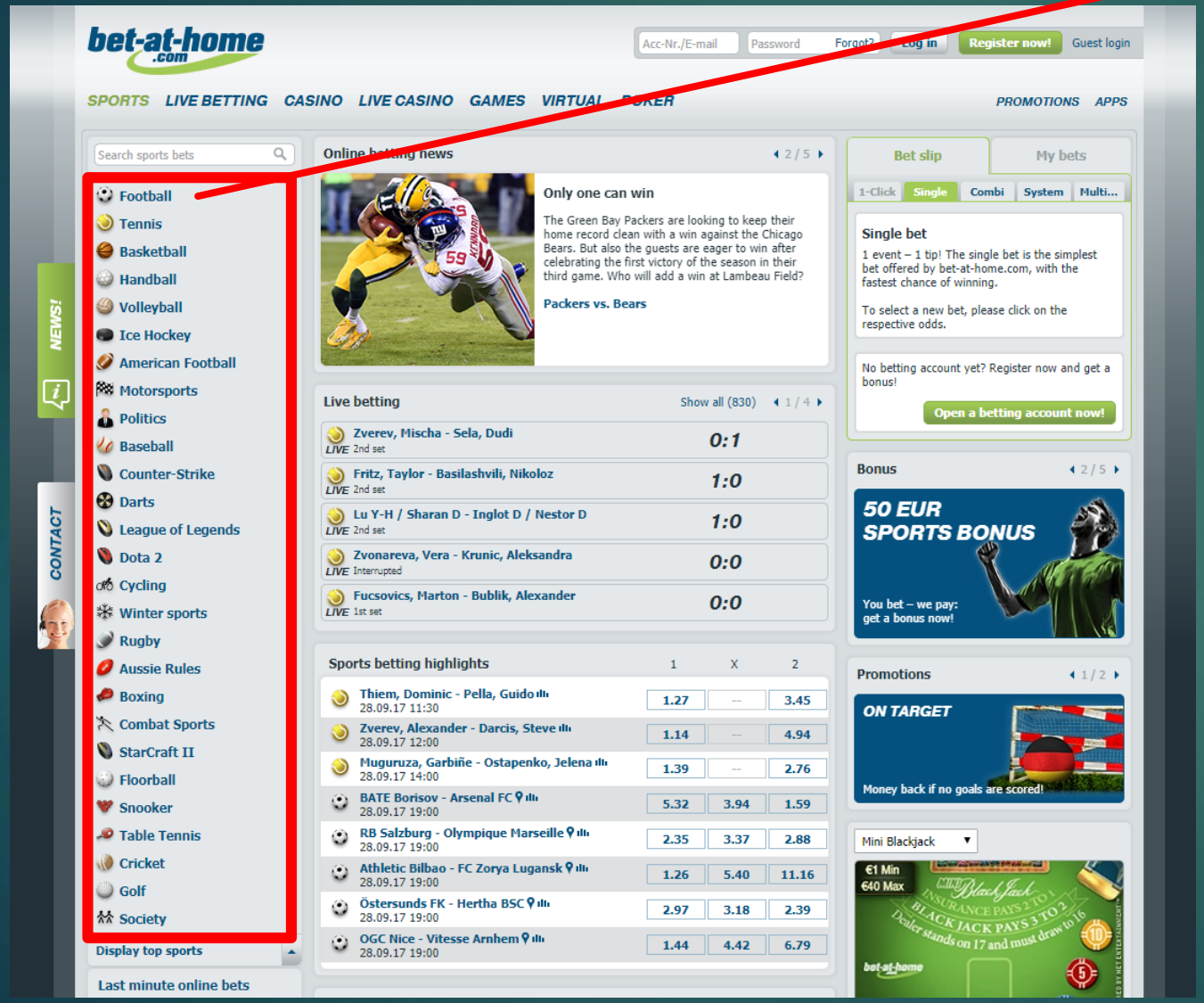
Azure Machine Learning Studio

DAVID DAXBACHER

Agenda

- Aktuelles „Problem“
- Azure Machine Learning Studio
- Machine Learning – Algorithmen
- Erster Versuch – Klassifizierung
- Live – Demo (Recommender System)
- Retrain Model

„Problem“


bet-at-home.com
Acc-Nr./E-mail
Password
Forgot?
Log in
Register now!
Guest login
SPORTS
LIVE BETTING
CASINO
LIVE CASINO
GAMES
VIRTUAL
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PROMOTIONS
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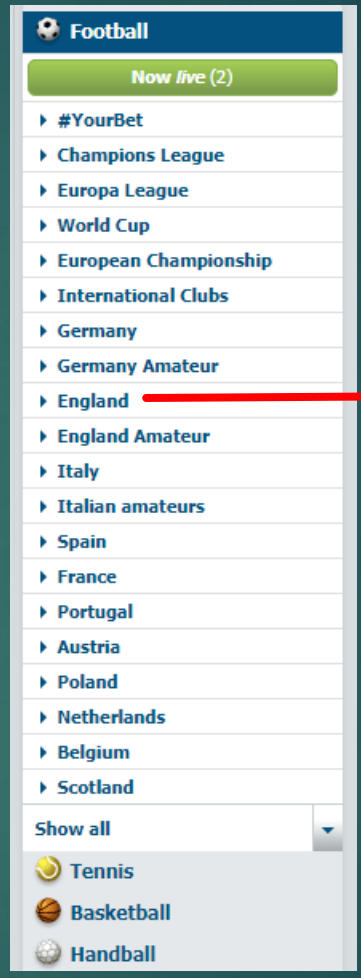
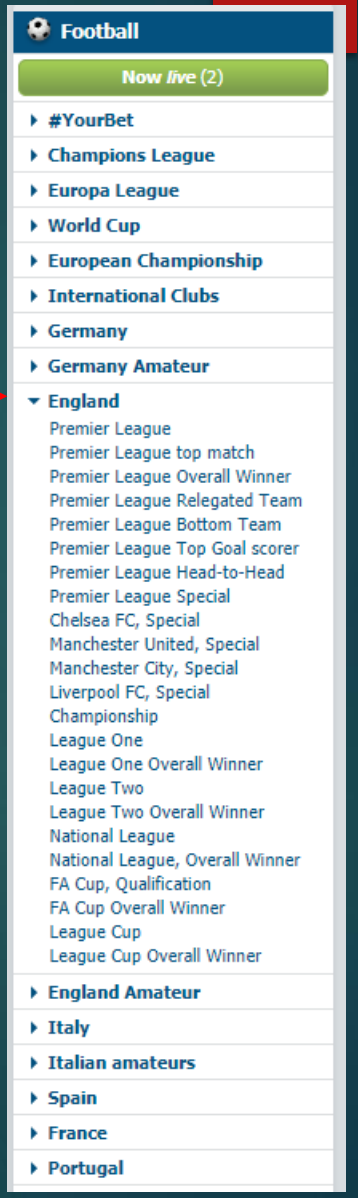
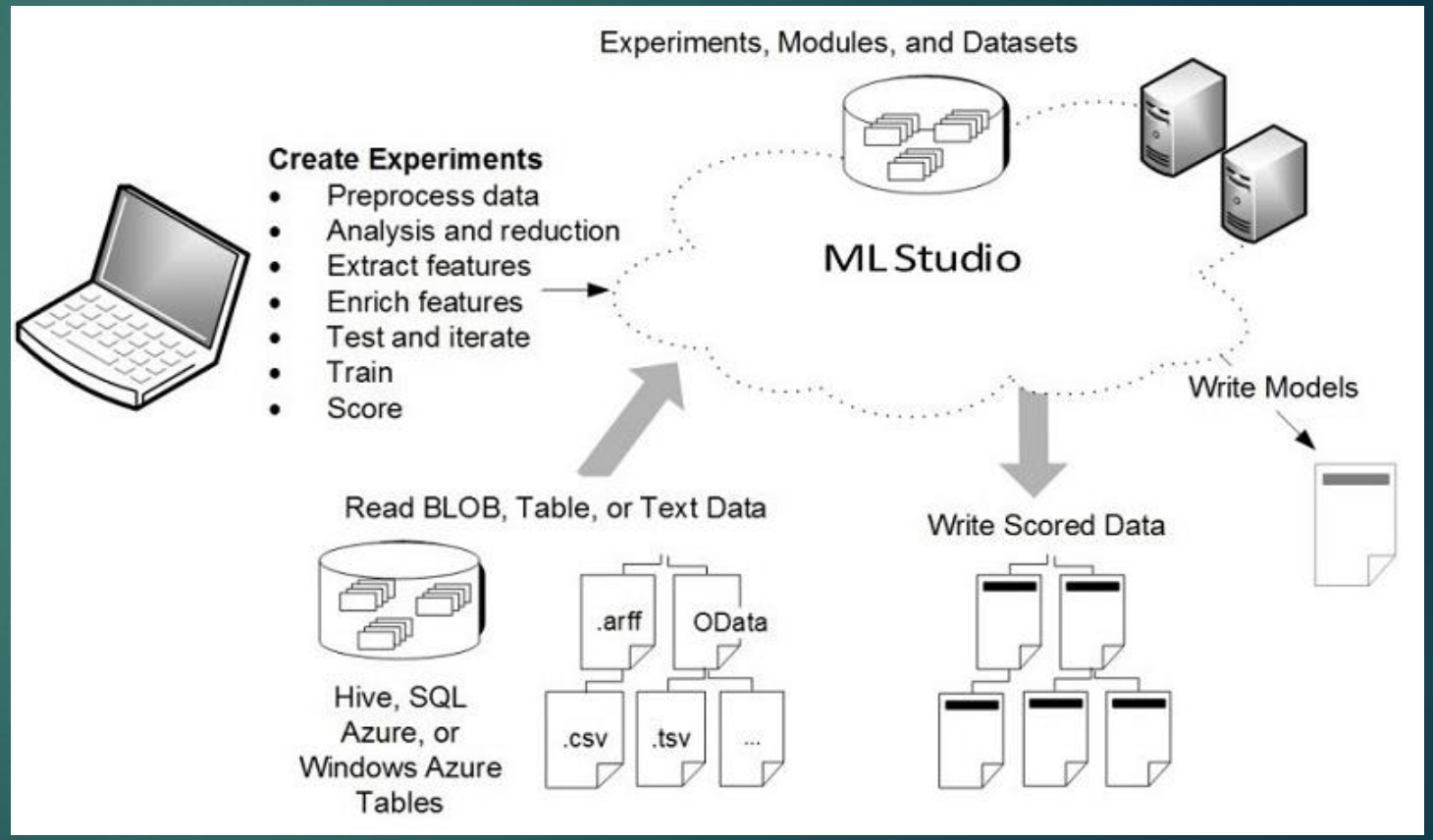
Search sports bets
Football
Tennis
Basketball
Handball
Volleyball
Ice Hockey
American Football
Motorsports
Politics
Baseball
Counter-Strike
Darts
League of Legends
Dota 2
Cycling
Winter sports
Rugby
Aussie Rules
Boxing
Combat Sports
StarCraft II
Floorball
Snooker
Table Tennis
Cricket
Golf
Society
Display top sports
Last minute online bets
NEWS!
CONTACT
Online betting news
Only one can win
The Green Bay Packers are looking to keep their home record clean with a win against the Chicago Bears. But also the guests are eager to win after celebrating the first victory of the season in their third game. Who will add a win at Lambeau Field?
Packers vs. Bears
Live betting
Show all (830)
Zverev, Mischa - Sela, Dudi 0:1
Fritz, Taylor - Basilashvili, Nikoloz 1:0
Lu Y-H / Sharan D - Inglot D / Nestor D 1:0
Zvonareva, Vera - Krunic, Aleksandra 0:0
Fucsovics, Marton - Bublik, Alexander 0:0
Sports betting highlights
Thiem, Dominic - Pella, Guido 1.27 3.45
Zverev, Alexander - Darcis, Steve 1.14 4.94
Muguruza, Garbiñe - Ostapenko, Jelena 1.39 2.76
BATE Borisov - Arsenal FC 5.32 3.94 1.59
RB Salzburg - Olympique Marseille 2.35 3.37 2.88
Athletic Bilbao - FC Zorya Lugansk 1.26 5.40 11.16
Östersunds FK - Hertha BSC 2.97 3.18 2.39
OGC Nice - Vitesse Arnhem 1.44 4.42 6.79
Bet slip
My bets
1-Click
Single
Combi
System
Multi...
Single bet
1 event – 1 tip! The single bet is the simplest bet offered by bet-at-home.com, with the fastest chance of winning.
To select a new bet, please click on the respective odds.
No betting account yet? Register now and get a bonus!
Open a betting account now!
Bonus
50 EUR SPORTS BONUS
You bet – we pay: get a bonus now!
Promotions
ON TARGET
Money back if no goals are scored!
Mini Blackjack
€1 Min
€40 Max


Football
Now live (2)
#YourBet
Champions League
Europa League
World Cup
European Championship
International Clubs
Germany
Germany Amateur
England
England Amateur
Italy
Italian amateurs
Spain
France
Portugal
Austria
Poland
Netherlands
Belgium
Scotland
Show all
Tennis
Basketball
Handball


Football
Now live (2)
#YourBet
Champions League
Europa League
World Cup
European Championship
International Clubs
Germany
Germany Amateur
England
Premier League
Premier League top match
Premier League Overall Winner
Premier League Relegated Team
Premier League Bottom Team
Premier League Top Goal scorer
Premier League Head-to-Head
Premier League Special
Chelsea FC, Special
Manchester United, Special
Manchester City, Special
Liverpool FC, Special
Championship
League One
League One Overall Winner
League Two
League Two Overall Winner
National League
National League, Overall Winner
FA Cup, Qualification
FA Cup Overall Winner
League Cup
League Cup Overall Winner
England Amateur
Italy
Italian amateurs
Spain
France
Portugal

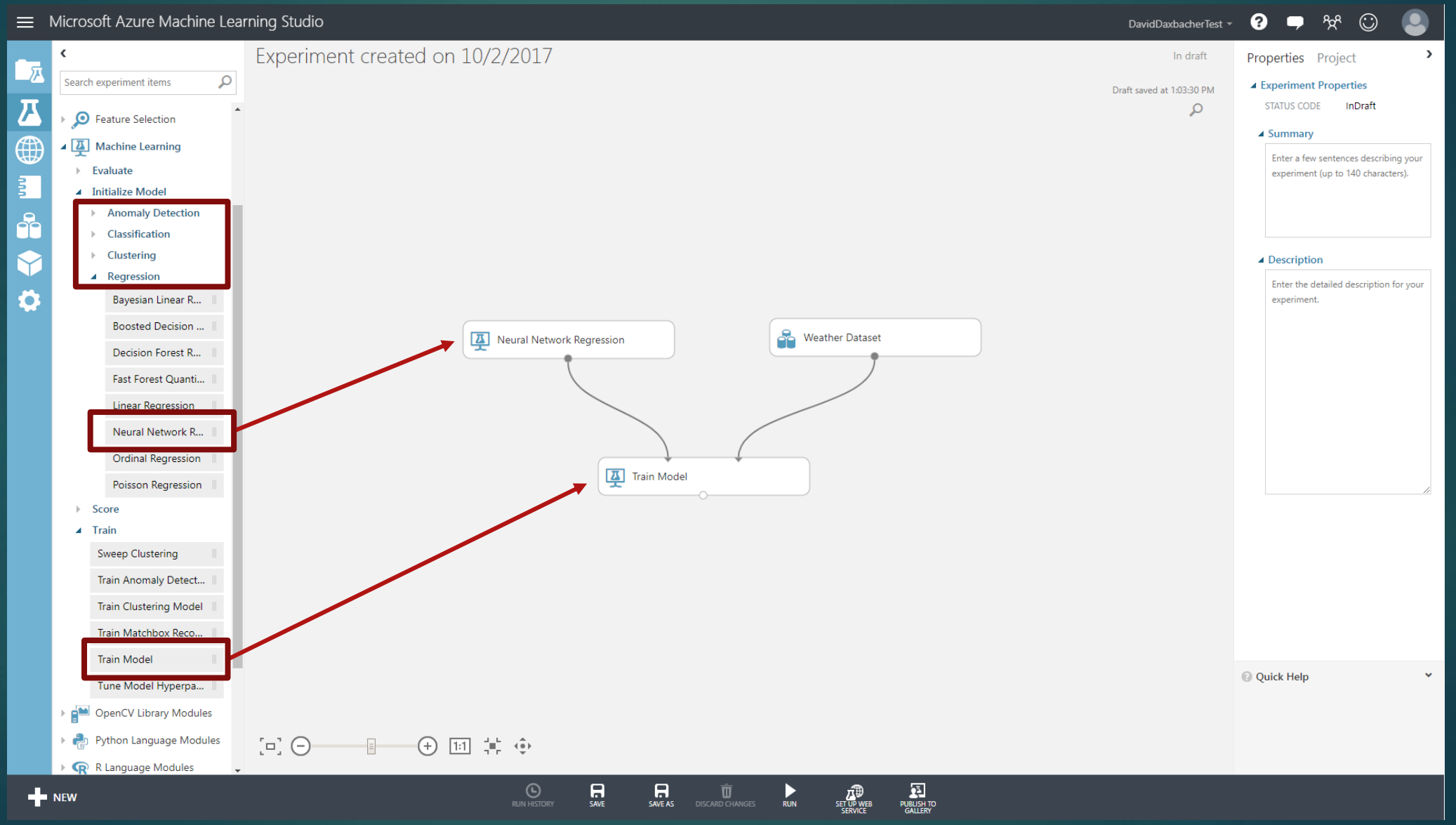
Azure Machine Learning Studio

- Interaktives Drag and Drop Tool
- Fully managed
- Keine Programmierung erforderlich
- Trainingsexperiment → Vorhersageexperiment → Webservice

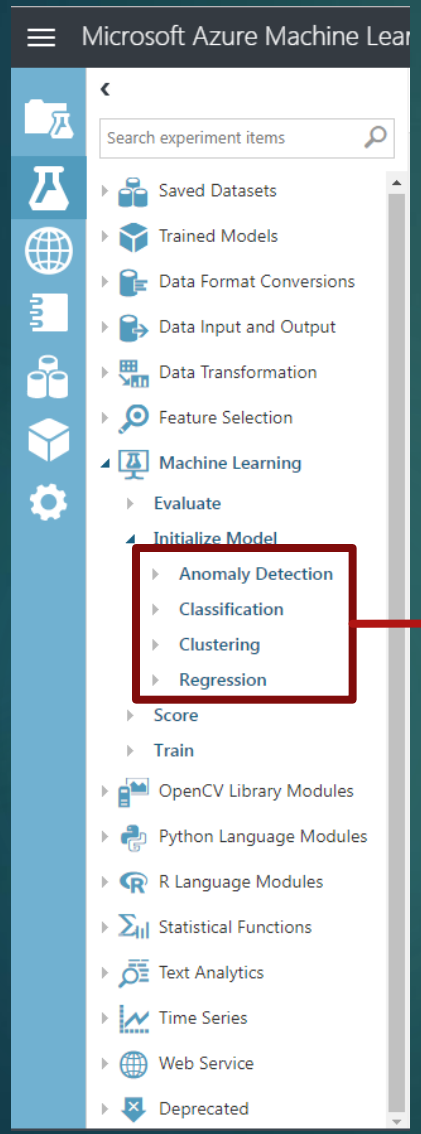


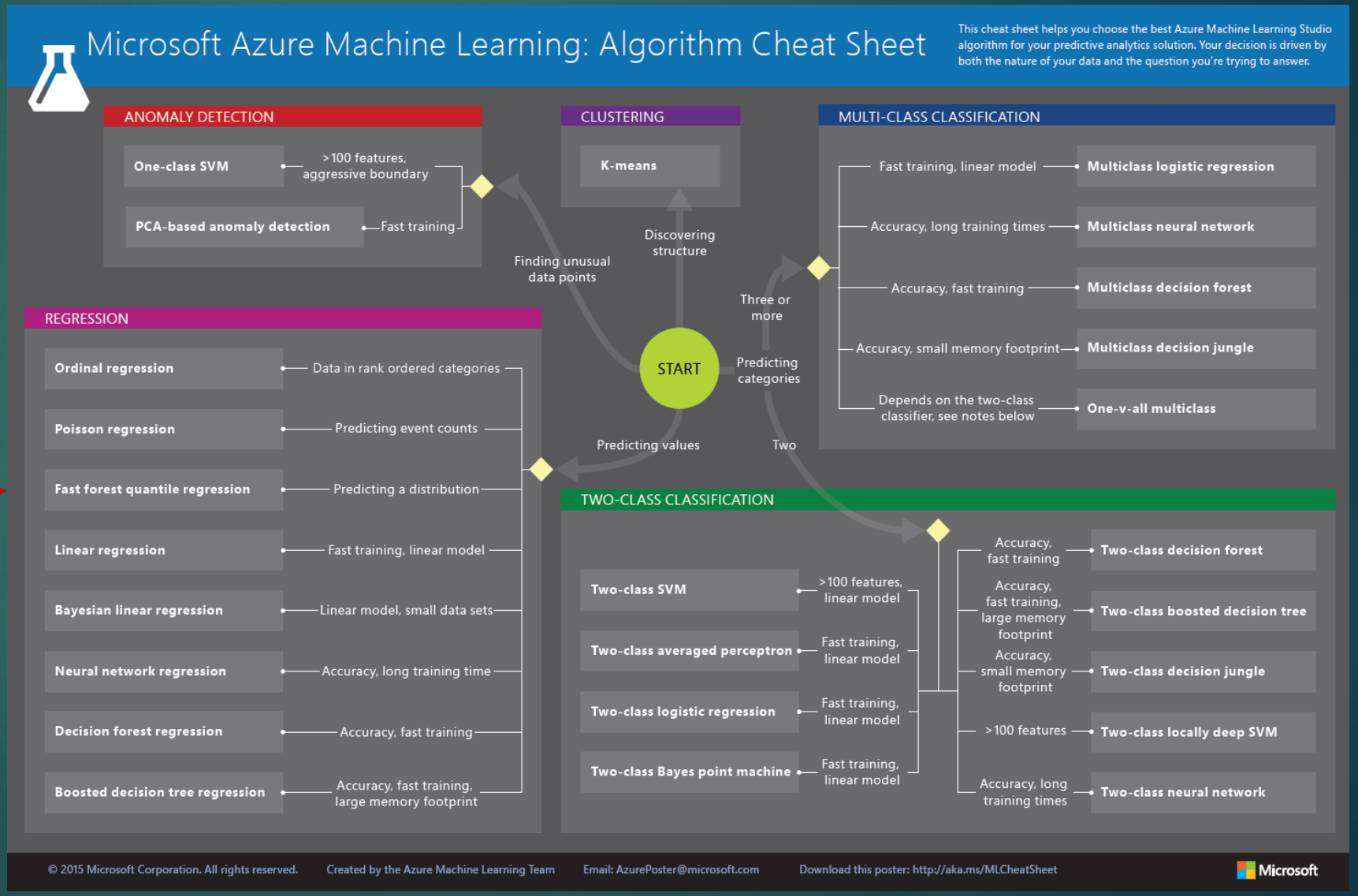
https://docs.microsoft.com/en-us/azure/machine-learning/studio/what-is-ml-studio

Machine Learning – Algorithmen

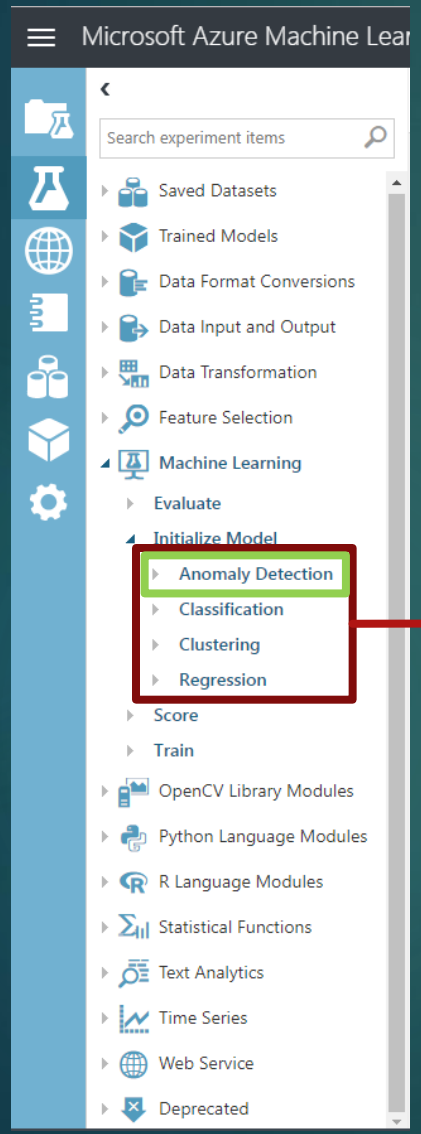


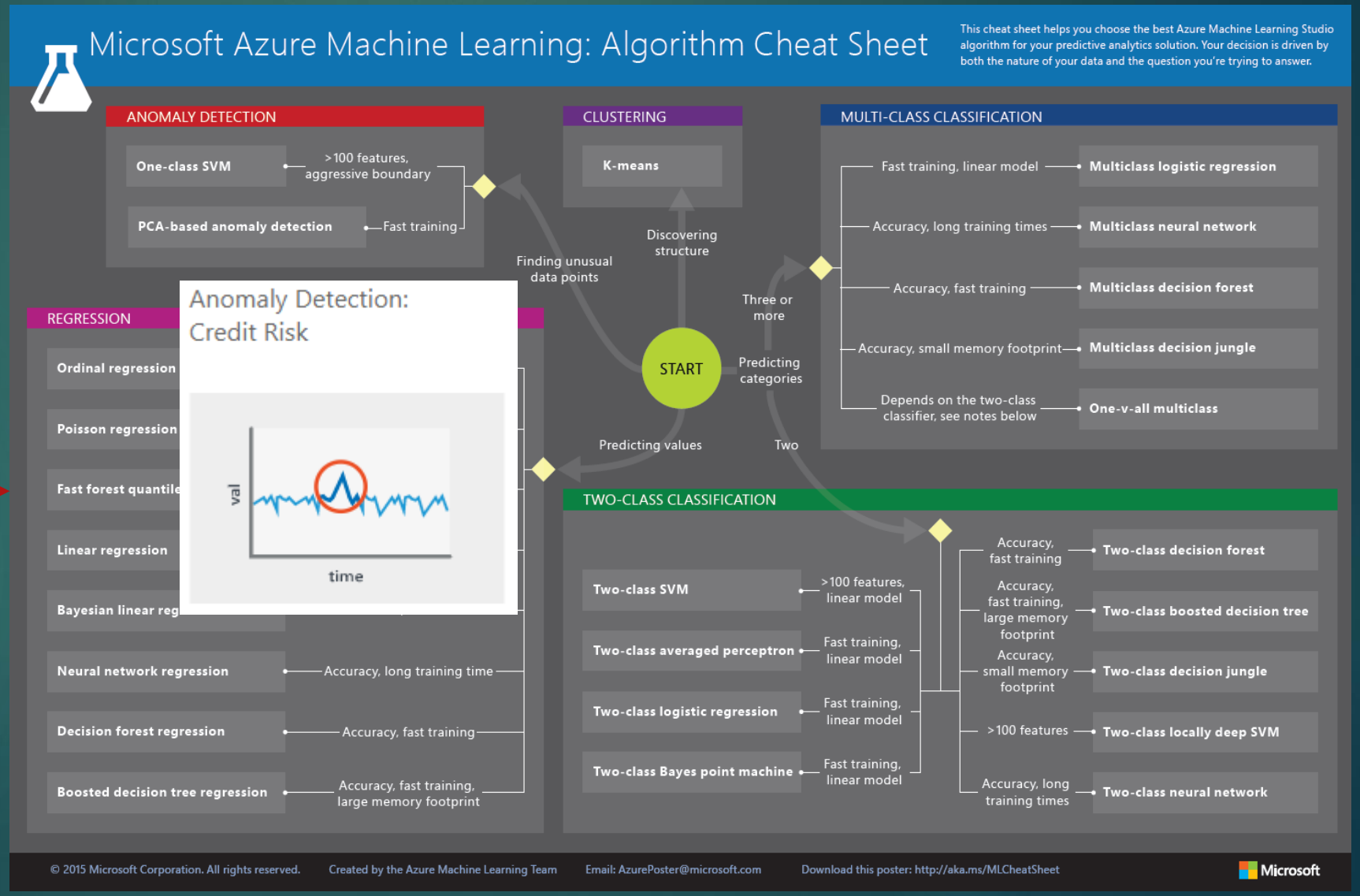
Machine Learning – Algorithmen



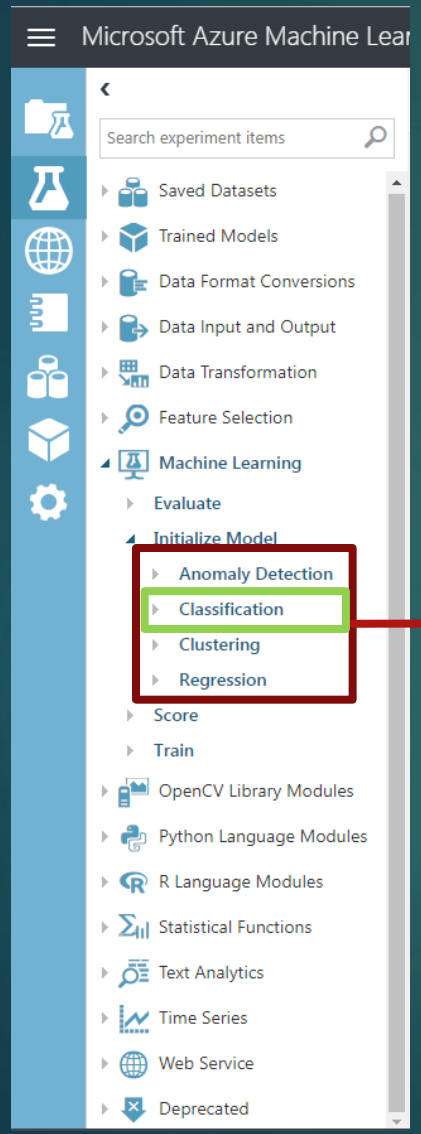


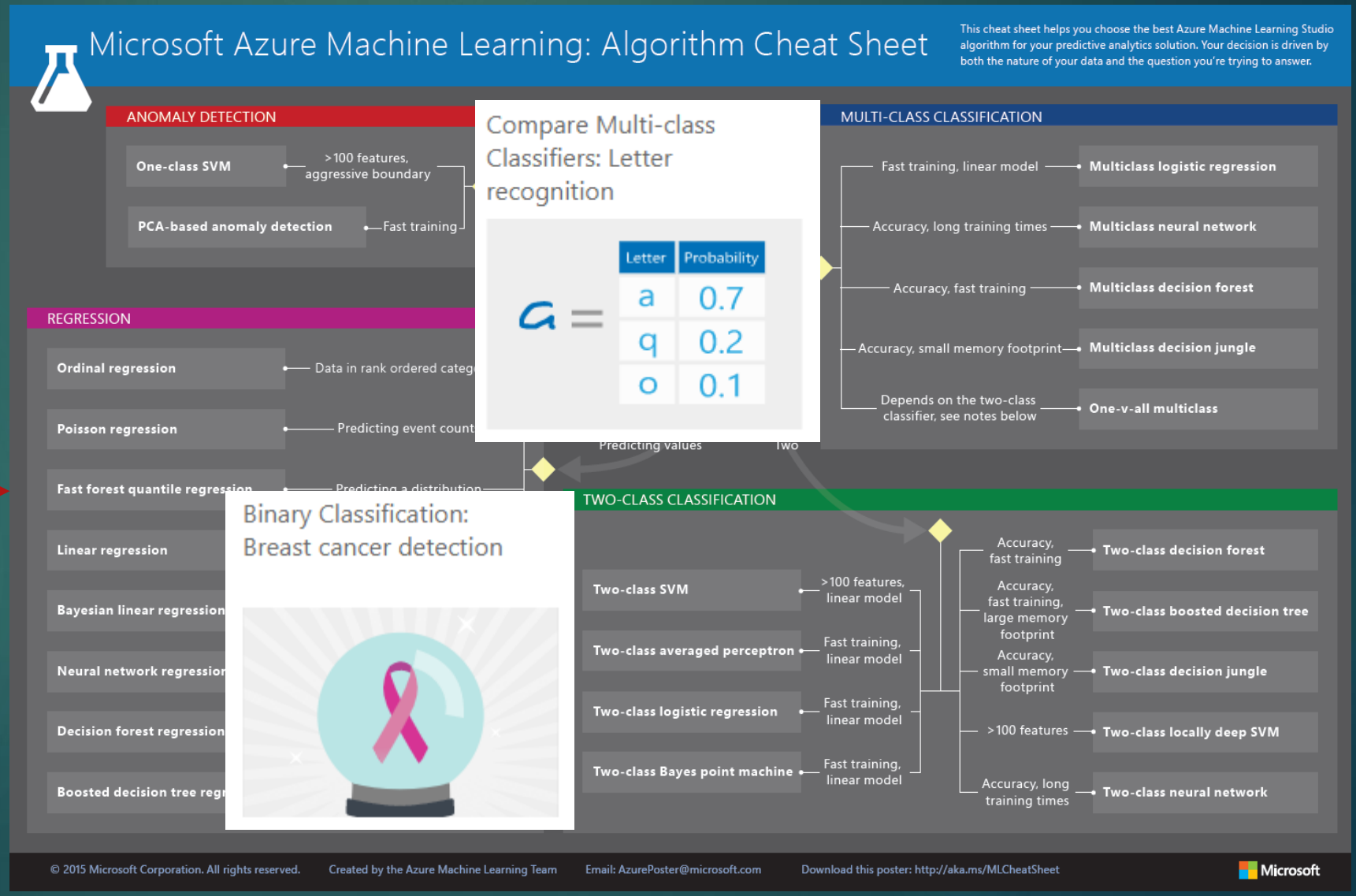
Machine Learning – Algorithmen



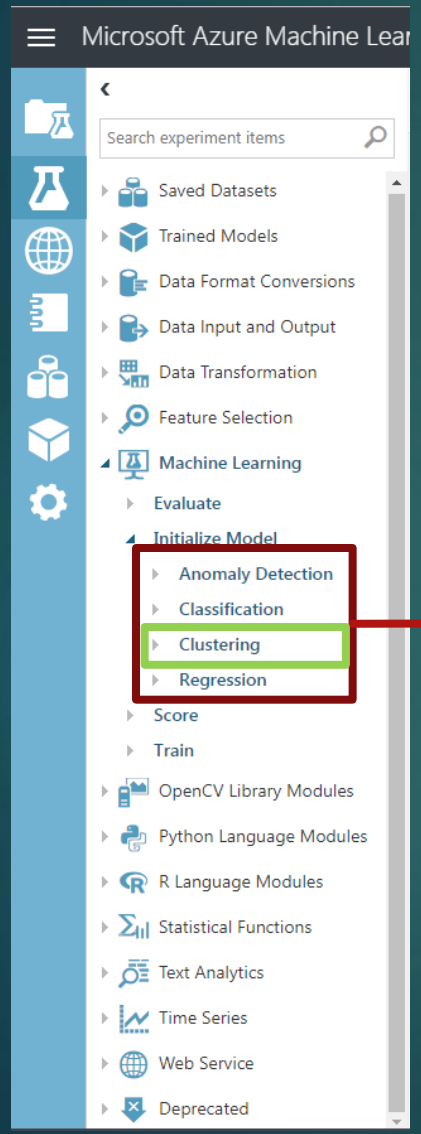


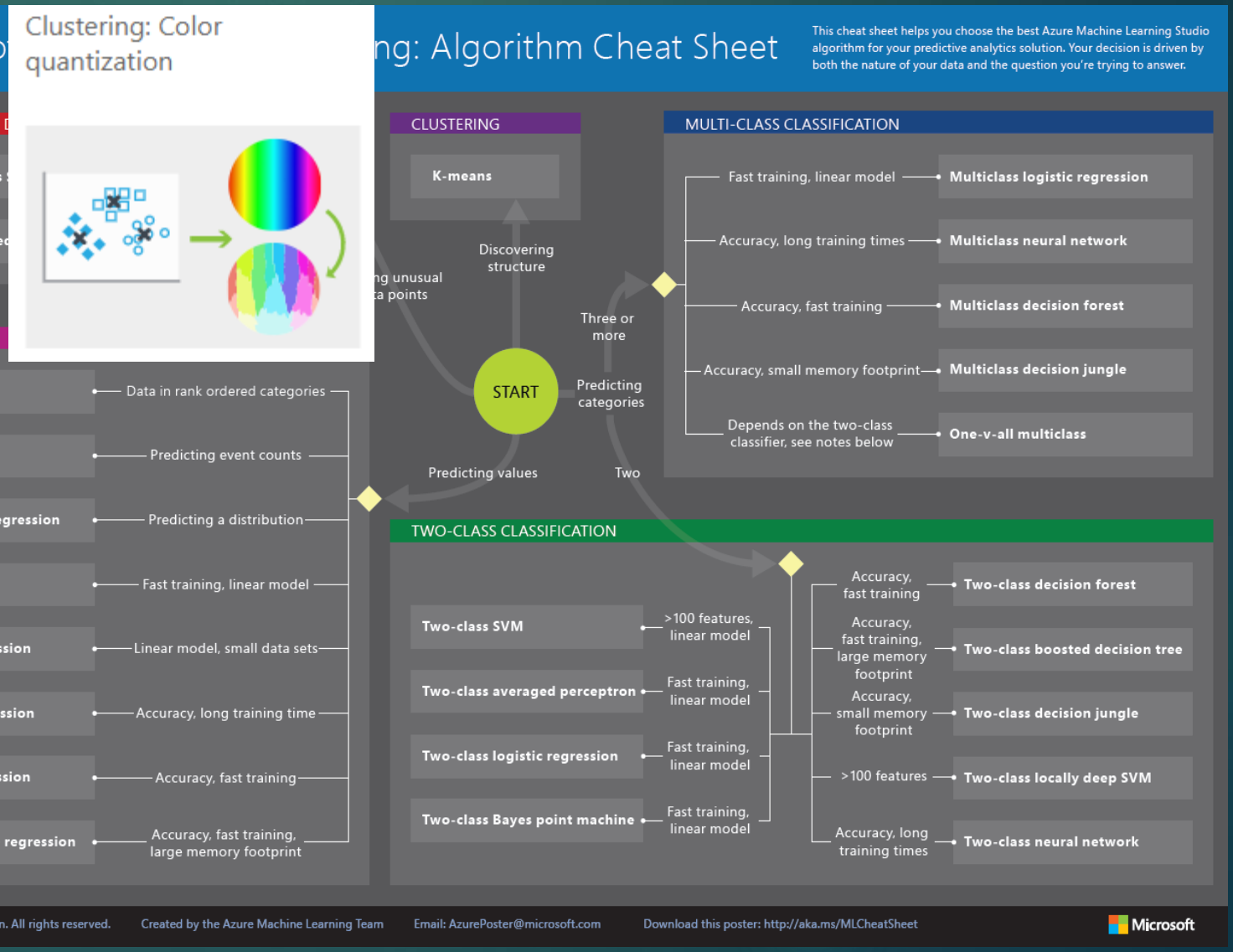
Machine Learning – Algorithmen



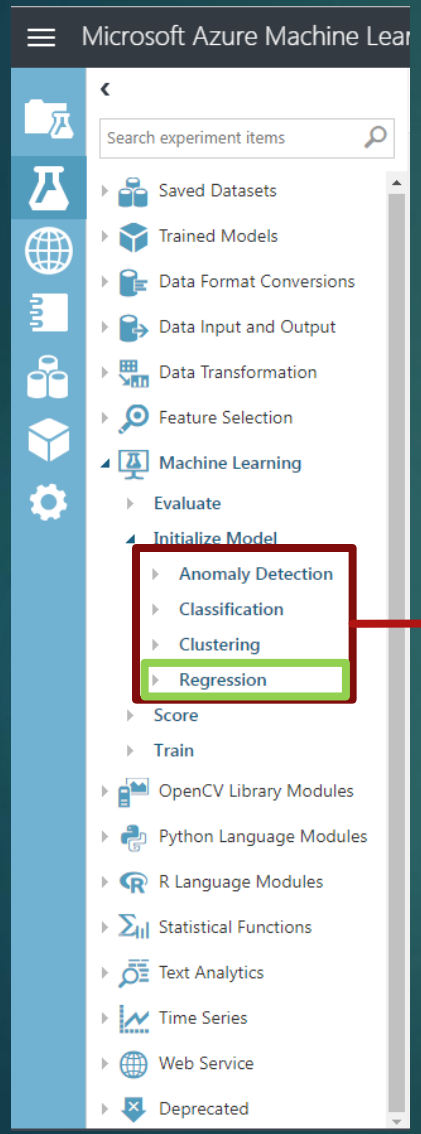


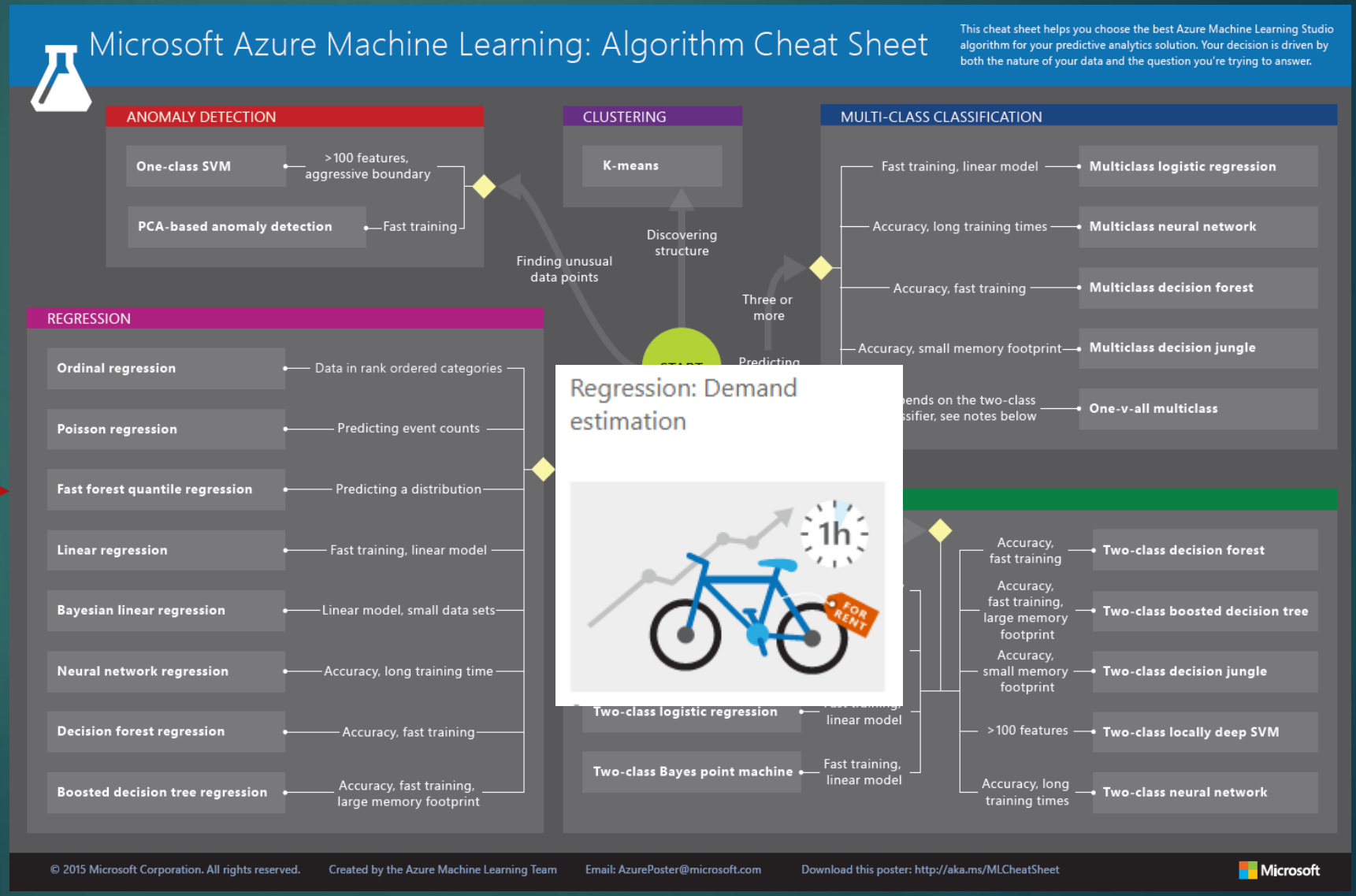
Machine Learning – Algorithmen





Machine Learning – Algorithmen



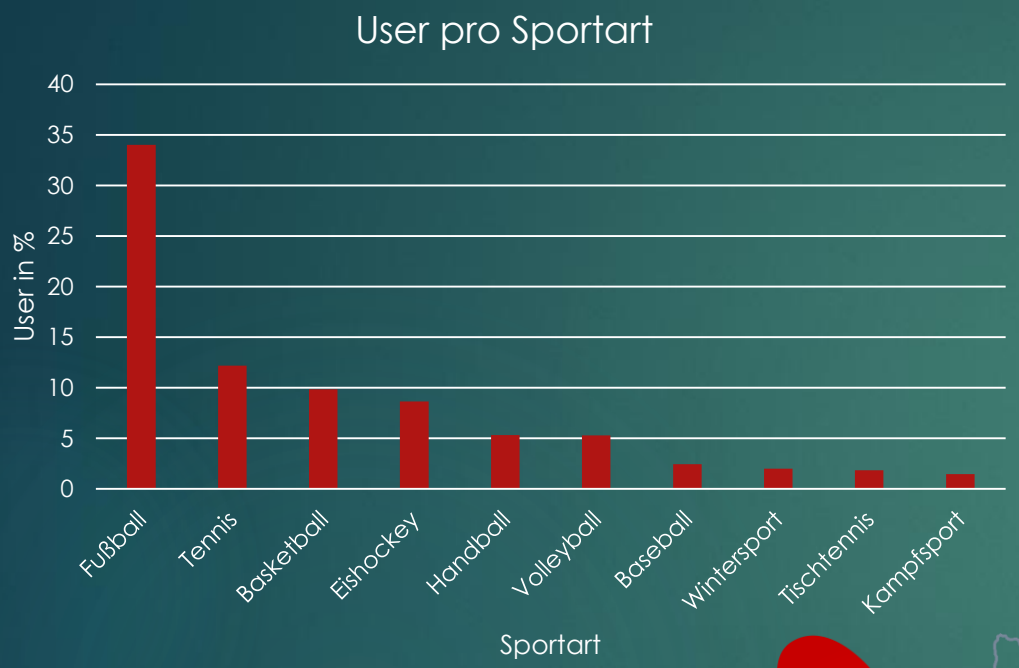


Classification

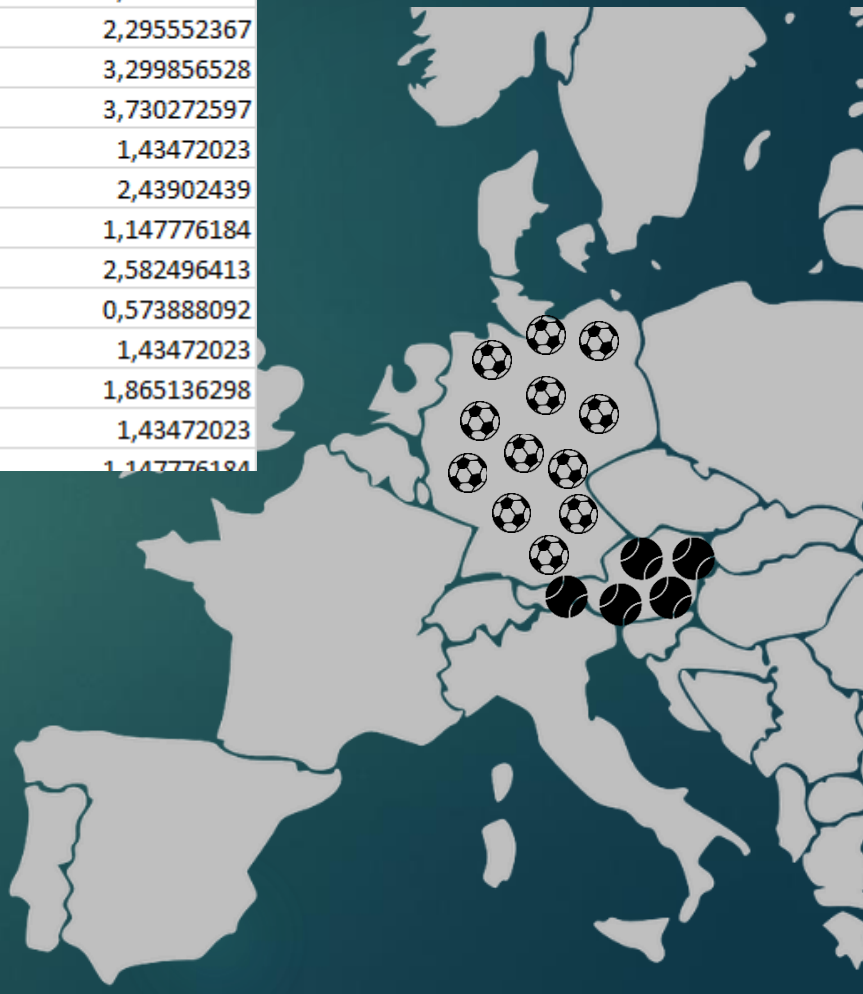
Col1	Col2	Col3	Col4	Col5	Col6	Col7	Col8	Col9	Col10	Col11	Col12	Col13	Col14
T	2	8	3	5	1	8	13	0	6	6	10	8	0
I	5	12	3	7	2	10	5	5	4	13	3	9	2
D	4	11	6	8	6	10	6	2	6	10	3	7	3
N	7	11	6	6	3	5	9	4	6	4	4	10	6
G	2	1	3	1	1	8	6	6	6	6	5	9	1
S	4	11	5	8	3	8	8	6	9	5	6	6	0
B	4	2	5	4	4	8	7	6	6	7	6	6	2
A	1	1	3	2	1	8	2	2	2	8	2	8	1
J	2	2	4	4	2	10	6	2	6	12	4	8	1
M	11	15	13	9	7	13	2	6	2	12	1	9	8
X	3	9	5	7	4	8	7	3	8	5	6	8	2
O	6	13	4	7	4	6	7	6	3	10	7	9	5
G	4	9	6	7	6	7	8	6	2	6	5	11	4
M	6	9	8	6	9	7	8	6	5	7	5	8	8
R	5	9	5	7	6	6	11	7	3	7	3	9	2
F	6	9	5	4	3	10	6	3	5	10	5	7	3
O	3	4	4	3	2	8	7	7	5	7	6	8	2
C	7	10	5	5	2	6	8	6	8	11	7	11	2
T	6	11	6	8	5	6	11	5	6	11	9	4	3
J	2	2	3	3	1	10	6	3	6	12	4	9	0
J	1	3	2	2	1	8	8	2	5	14	5	8	0
H	4	5	5	4	4	7	7	6	6	7	6	8	3

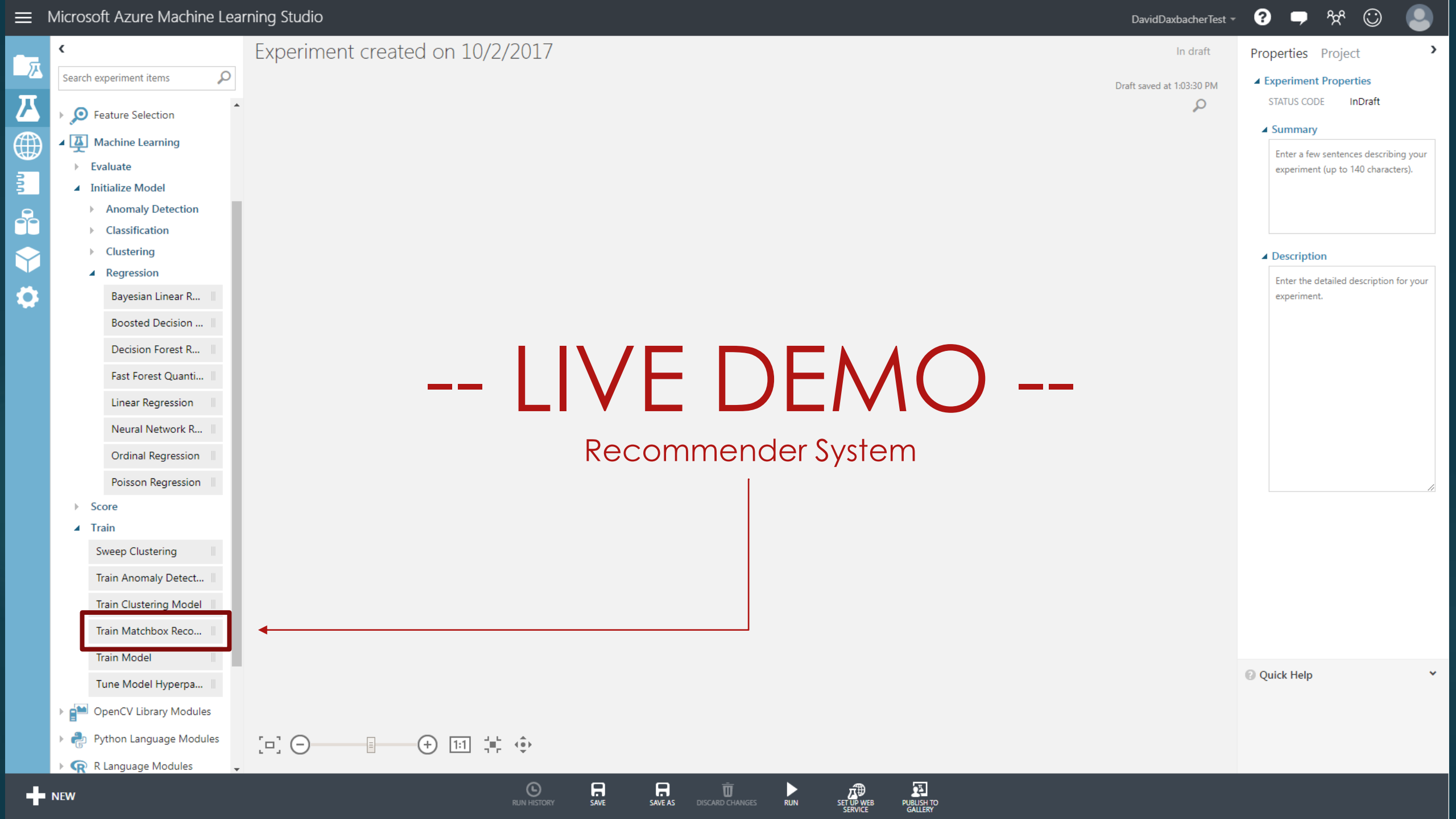
SportID	Sex	CountryID	Street	ZIPCode	Birthdate
Fußball	0	152	Street12108530	2632	1977-10-01T00:00:00
Eishockey	0	75	Street12108541	51467	1945-05-04T00:00:00
Fußball	0	75	Street12108541	51467	1945-05-04T00:00:00
Tennis	0	75	Street12108541	51467	1945-05-04T00:00:00
Fußball	0	75	Street12108563	63571	1975-09-30T00:00:00
Streethockey	0	75	Street12108594	55262	1944-01-07T00:00:00
Curling	0	75	Street12108594	55262	1944-01-07T00:00:00
Wasserball	0	75	Street12108594	55262	1944-01-07T00:00:00
Wintersport	0	75	Street12108594	55262	1944-01-07T00:00:00
Feldhockey	0	75	Street12108594	55262	1944-01-07T00:00:00
Tischtennis	0	75	Street12108594	55262	1944-01-07T00:00:00
Floorball	0	75	Street12108594	55262	1944-01-07T00:00:00
Pesäpallo	0	75	Street12108594	55262	1944-01-07T00:00:00
Beachvolleyball	0	75	Street12108594	55262	1944-01-07T00:00:00
Rugby	0	75	Street12108594	55262	1944-01-07T00:00:00
Basketball	0	75	Street12108594	55262	1944-01-07T00:00:00
Eishockey	0	75	Street12108594	55262	1944-01-07T00:00:00
Bandy	0	75	Street12108594	55262	1944-01-07T00:00:00

Classification



Sportart	Durchschnittl. Wetten in Prozent
Fußball	28,69440459
Tennis	9,899569584
Basketball	4,447632712
Eishockey	5,595408895
Handball	2,295552367
Volleyball	3,299856528
Baseball	3,730272597
Wintersport	1,43472023
Tischtennis	2,43902439
Kampfsport	1,147776184
E-Sport	2,582496413
Boxen	0,573888092
Darts	1,43472023
Counter-Strike	1,865136298
Beachvolleyball	1,43472023
Rugby	1,147776184




Microsoft Azure Machine Learning Studio
DavidDaxbacherTest
Experiment created on 10/2/2017
In draft
Draft saved at 1:03:30 PM
Search experiment items
Feature Selection
Machine Learning
Evaluate
Initialize Model
Anomaly Detection
Classification
Clustering
Regression
Bayesian Linear R...
Boosted Decision ...
Decision Forest R...
Fast Forest Quanti...
Linear Regression
Neural Network R...
Ordinal Regression
Poisson Regression
Score
Train
Sweep Clustering
Train Anomaly Detect...
Train Clustering Model
Train Matchbox Reco...
Train Model
Tune Model Hyperpa...
OpenCV Library Modules
Python Language Modules
R Language Modules
-- LIVE DEMO --
Recommender System
Properties
Project
Experiment Properties
STATUS CODE
InDraft
Summary
Enter a few sentences describing your experiment (up to 140 characters).
Description
Enter the detailed description for your experiment.
Quick Help
NEW
RUN HISTORY
SAVE
SAVE AS
DISCARD CHANGES
RUN
SET UP WEB SERVICE
PUBLISH TO GALLERY

Evaluation - Rating Predicition

…	…	…
12345	Bundesliga	10
12345	NBA	3
12345	Serie A	5
…	…	…

12345	Bundesliga	10
12345	NBA	3

Trainingsdaten

12345	Serie A	5

Testdaten

Train Matchbox Recommender

12345	Serie A	???

Evaluation - Rating Predicition

…	…	…
12345	Bundesliga	10
12345	NBA	3
12345	Serie A	5
…	…	…

12345	Bundesliga	10
12345	NBA	3

Trainingsdaten

12345	Serie A	5

Testdaten

Train Matchbox Recommender

12345	Serie A	6

Evaluation – Item Recommendation

…	…	…
12345	Bundesliga	10
12345	NBA	3
12345	Serie A	5
12345	Premier League	9
…	…	…

12345	Bundesliga	10
12345	Serie A	5

Trainingsdaten

12345	NBA	3
12345	Premier League	9

Testdaten

Train Matchbox Recommender

???	???			

Evaluation – Item Recommendation

…	…	…
12345	Bundesliga	10
12345	NBA	3
12345	Serie A	5
12345	Premier League	9
…	…	…

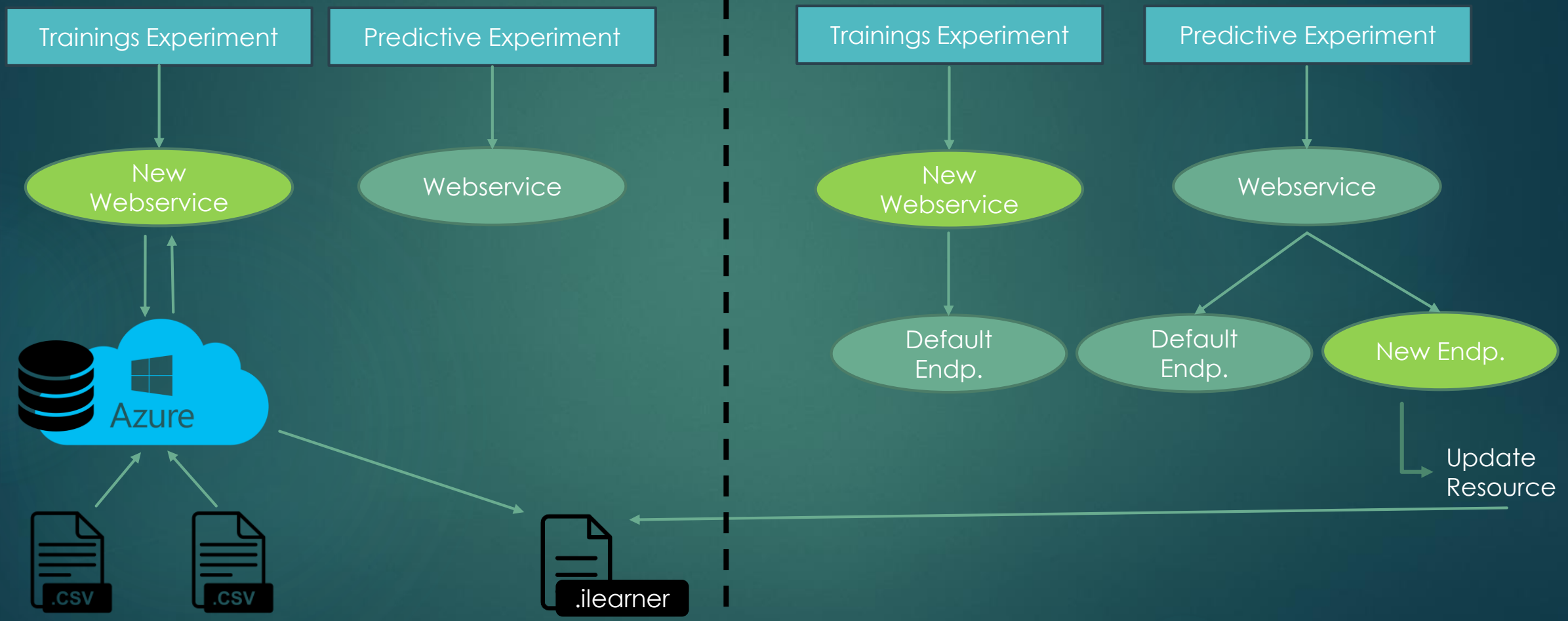
12345	Bundesliga	10
12345	Serie A	5

Trainingsdaten

12345	NBA	3
12345	Premier League	9

Testdaten

Train Matchbox Recommender

Premier League	NBA			

Retrain Model