Second Year Project: Bomberbot Decision Making

Houda Alberts, Leila Talha, Putri van der Linden, Shara Aerssens & Urja Khurana
Client: Robrecht Jurriaans

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Introduction

Introduction

- Bomberbot Decision Making
- Program that uses Machine Learning techniques to predict whether a potential costumer will buy the Bomberbot learning environment
  - Based on usage data
  - Reasons for choosing not to buy

Definition of Done

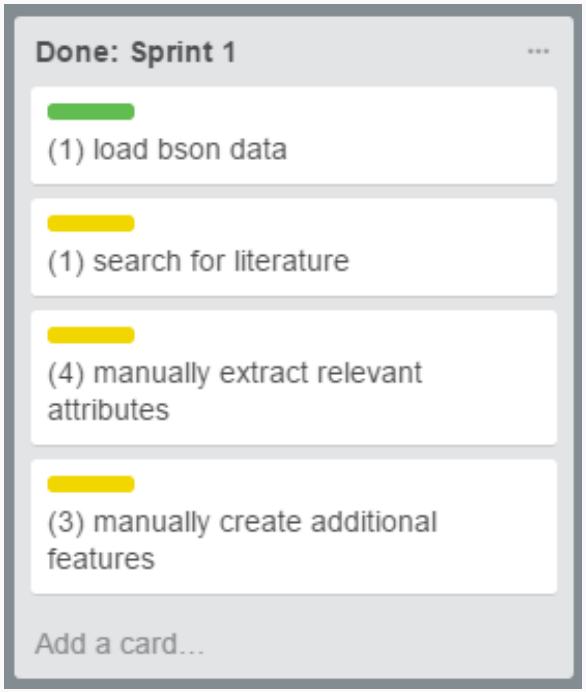
Definition of Done

Task	Requirement(s)
Manually ...	Find information by hand by looking at data for example. This then needs to be documented. This is finished when no additional information can be found or can be extracted by hand.
Search ...	Articles and information need to be found, extracted, documented and must give a conclusion. This information then must be put into the Google Drive for everyone to access.
Document ...	Find information from output of the data and/or algorithms. This then also needs to be documented.
Evaluate ...	Validate the results and change where necessary.
All other tasks	Working code without errors and the output must look visibly correct: All outputs are checked later in specified tasks.

Progress Update

First Sprint

- First Sprint:
  - Load bson
  - Feature selection
    - Manually define features

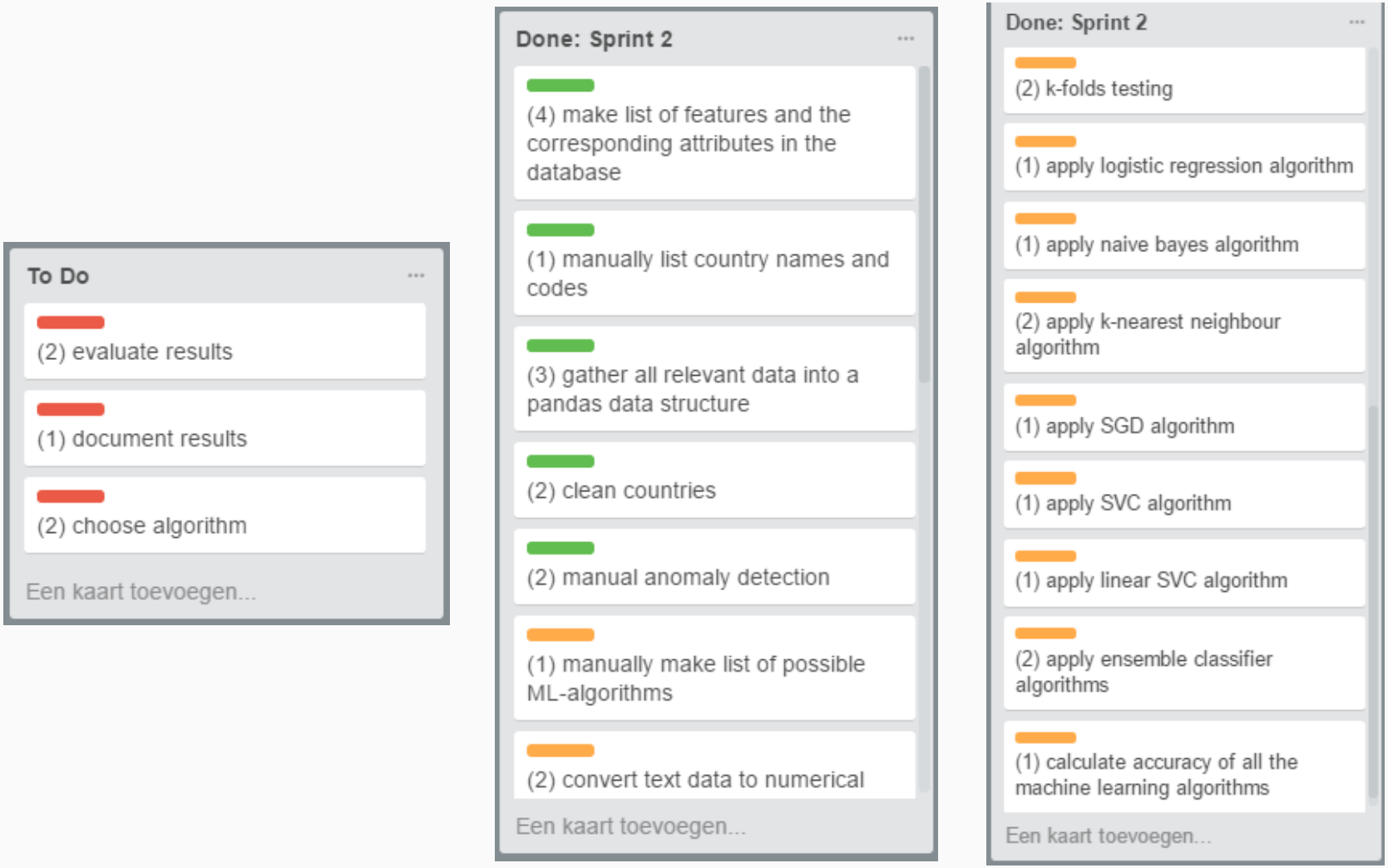


Second Sprint

- Second Sprint:
  - Preprocess data
    - Find attributes in data and convert to dataframe
    - Clean country names
  - Apply ML-algorithms on data
    - Convert text to numerical values
    - List all possible ML-algorithms and apply them on data
    - Accuracies between 60% - 80% for now

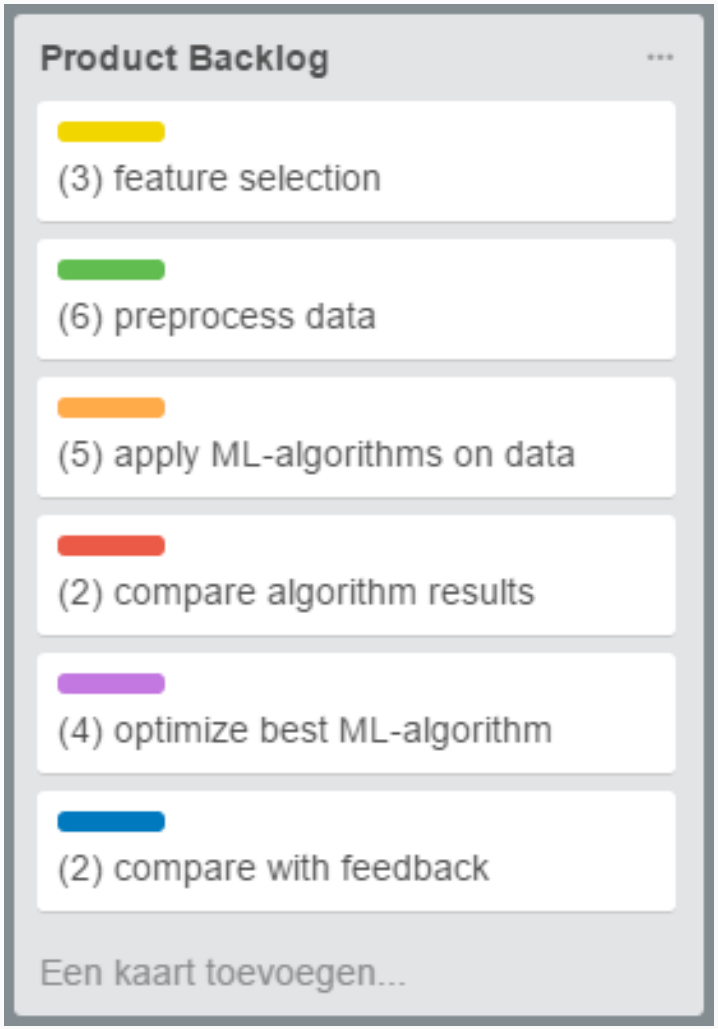
	Teacher/Parent	Amount Classrooms	Average Amount of Students	Average Grade	Average Time	Average Tries	Referral	Country	Mobile Teacher	Browser Teacher	OS Teacher	Mobile Student	E S
0	1	4	3	0	340.52	0	0	colombia	None	None	None	None	N
1	1	0	0	0	0	0	0	net	None	None	None	None	N
2	1	0	1	0	0	0	0	net	None	None	None	None	N
3	1	0	0	0	0	0	0	net	None	None	None	None	N
4	1	0	0	0	0	0	0	net	None	None	None	None	N

Current Sprint Board



Revised Scrum Board

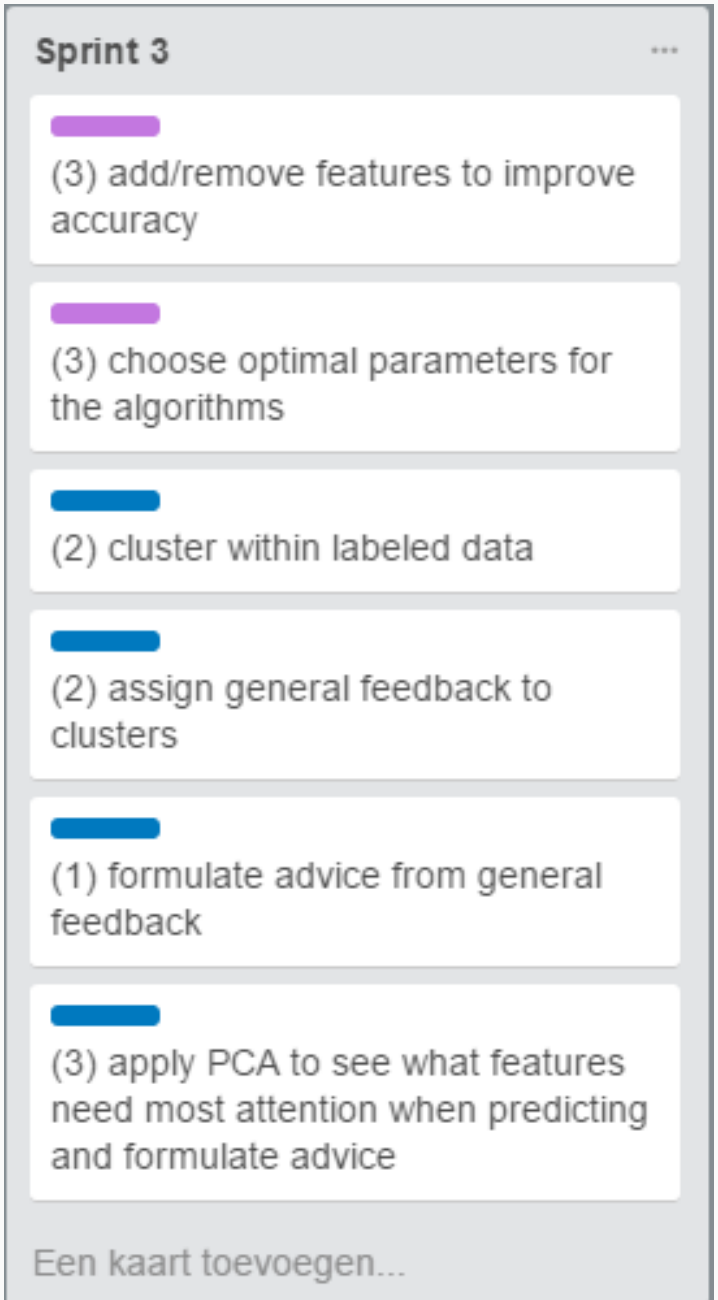
Product Backlog



- Updated relative times
- Technical product owner, so technical product backlog
- Predict buying behavior of costumers
- See what aspects are predictive for not buying
- Alter sales strategy

Future Sprints

Third Sprint



In general, the third sprint consists of the following tasks:

- Optimize the algorithm
- Formulate advices by looking at feedback
- Formulate advices based on most expressive features (PCA)

Last Sprint

- Time available for tasks of third sprint that are not finished yet
- Review and discuss overall results with product owner
- Writing the reports, fix the last presentation and improve the implementation where necessary

Questions?