AI-Car Project with Unity and Python

# First Results with Naive Bayes and one Training Round:

Code: learning\_results\_01\_nb.py  
Dataset: learning\_training\_data\_results\_01\_nb

Results:

Length of Dataset: 165

Length of Training-Data: 123

Length of Test-Data: 42

Test Score

Score of isTurningLeft-Prediction: 0.959349593495935

Score of isTurningRight-Prediction: 0.7154471544715447

Score of isKeepingSTraight-Prediction: 0.6910569105691057

Score of isAccelerating-Prediction: 0.9186991869918699

# Second Results with Naïve Bayes and 3 Training Rounds:

Code: learning\_results\_01\_nb.py  
Dataset: learning\_training\_data\_results\_02\_nb

Results:

Length of Dataset: 656

Length of Training-Data: 492

Length of Test-Data: 164

Test Score

Score of isTurningLeft-Prediction: 0.9308943089430894

Score of isTurningRight-Prediction: 0.7296747967479674

Score of isKeepingSTraight-Prediction: 0.6910569105691057

Score of isAccelerating-Prediction: 0.9024390243902439

# Third Results with Naïve Bayes and 10 Training Rounds (driving faster and not that cautious the last 7 rounds):

Code: learning\_results\_01\_nb.py  
Dataset: learning\_training\_data\_results\_02\_nb

Results:  
Length of Dataset: 5017

Length of Training-Data: 3762

Length of Test-Data: 1255

Test Score

Score of isTurningLeft-Prediction: 0.9234449760765551

Score of isTurningRight-Prediction: 0.6533758639021797

Score of isKeepingSTraight-Prediction: 0.5683147262094631

Score of isAccelerating-Prediction: 0.960127591706539

# Autonome Testfahrten jetzt möglich (15.08.2018):

Alle 3 vorherigen Trainingssets mit 60 Grad Sensor Neigung liefen sehr schlecht. (Fahren gegen die erste Wand)  
Vermutung: ML Algorithmus und Daten zu schlecht um gute Befehle zu erteilen, obwohl Ich 70-90% gute Testergebnisse bekomme.

Versuch mit 30 Grad Sensor Einstellung (learning\_training\_data\_results\_04\_nb) :

learning\_training\_data\_results\_04\_nb:

Length of Dataset: 141

Length of Training-Data: 105

Length of Test-Data: 36

-----Test Score-----

Score of isTurningLeft-Prediction: 0.9619047619047619

Score of isTurningRight-Prediction: 0.8285714285714286

Score of isKeepingSTraight-Prediction: 0.7619047619047619

Score of isAccelerating-Prediction: 1.0

Klappt nicht, fährt gegen erste Wand!

Versuch mit 30 Grad Sensor Einstellung (learning\_training\_data\_results\_05\_nb) :

Length of Dataset: 282

Length of Training-Data: 210

Length of Test-Data: 72

-----Test Score-----

Score of isTurningLeft-Prediction: 0.9333333333333333

Score of isTurningRight-Prediction: 0.7952380952380952

Score of isKeepingSTraight-Prediction: 0.7571428571428571

Score of isAccelerating-Prediction: 0.9714285714285714

Klappt auch nicht…