Software part

Beside the hardware the project also needs a strong software part. The most important is to detect and recognize the animal. It is not a simple task because of the noise in picture and the obstacle between the car and the animal. It requires advanced computer vision algorithms and a well-performing AI. It is important to make a difference between animals and other vehicles on the road, or static heat sources next to the road. It might be also a good idea to decide based not only the one picture at the given time, but also compare it to the information of the previous pictures, so we can filter out accident noise and false positive cases.

The usage of multiple cameras allows us to triangulate the exact position of the animal, which is way more accurate, than only using one image and the displacements in it. By knowing the velocity of the vehicle, we can also calculate the moving direction and speed of the animal and based on that information we can estimate the chance of a possible collision and make the right decision.