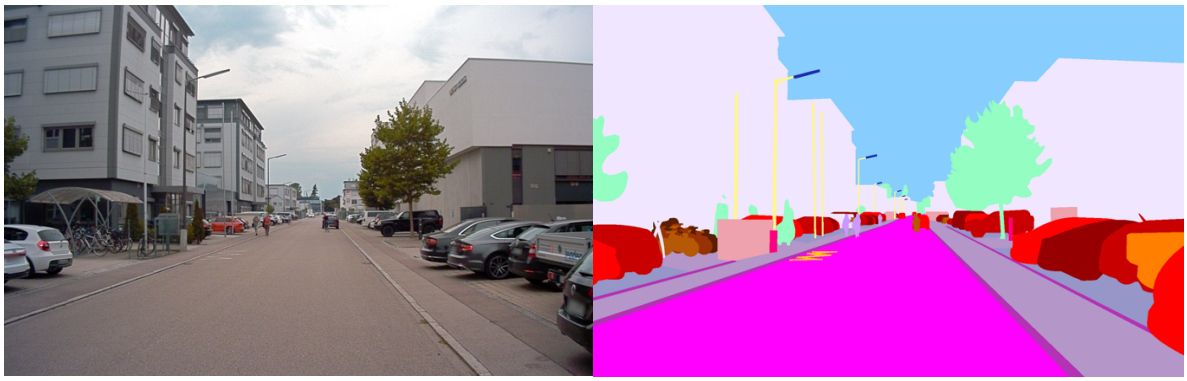
SPORTKEUR 2.0: COMPUTER VISION FOR SEMANTICALLY SEGMENTED IMAGES



In the Netherlands, around 9.4 million people play sports every week. Sporting events are growing on a large scale and the popularity of more extreme sports is also increasing. These sports also involve risks. However, at the moment, there is no product or approach anywhere in the world that allows us to look at the risks involved in sports. Thus, our project Sportkeur provides a risk management tool around sports, sports materials and sporting events in a systematic way.
SportKeur 2.0 focuses on developing and validating in practice a tool to determine the risks of sports, sports facilities, and sporting events and make them transparent and manageable. As a part of this process, our client Go2Sure would like to analyze the risks involved in biking events. Along with the Royal Dutch Cycling Union (KNWU), Go2Sure ensures the safety aspects of such events. Conventionally, an inspection is performed by a safety inspector who inspects the biking arena/track for possible hazardous situations. Along with the expertise of Ambient Intelligence, they would like to automate this process where these situations could be detected with the use of Computer Vison techniques. The idea is to develop such a solution with the help of semantically segmented data to detect hazardous situations like poor road conditions, unclear track directions, steep turns, missing sign boards etc. A preliminary study using Audi test bench data has been performed by using off-the-shelf deep learning methods and we would like to hire a motivated computer vision analyst to bring this project to live. The objective is to make the system robust and deployable for real life scenarios. If you think this project suits your interest, please do not hesitate to contact us.

TASK DESCRIPTION

- Use a test bench dataset to develop an algorithm which can detect various elements in a traffic scenario (eg, roads, vehicles, pedestrians, traffic lights, poles, other obstacles, traffic islands)
- Build an algorithm to detect risks for the event. Eg. poles present in the driving area.
- Test the model for the Dutch infrastructure. Since the test bench dataset might be from other countries/cities, the validation tests should be performed in the Netherlands.
- Build an easy-to-use app which shows the location of risk area.

PRACTICAL INFORMATION

- Student profile: internship student with an affinity towards computer vision and deep learning algorithms.
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