**Project Title:**

**Team members**

1. Nicolas Humbert
2. Yann-Arthur Tcheumani Mbialeu
3. Tobias Münzberg
4. Jan Tagge

**Project Description**

*Explain the main overall objectives of the project and provide a brief review on previous research on that topic (Maximum length 300 words).*

*We want to develop a software for potentially autonomous vehicles that detects zebra crossings and decides if there are people or animals crossing it using a deep learning system. The software will be based on Matlab and will use the image processing toolbox and functions such as edge detection. To detect the zebra crossings we will use a camera which is always mounted on a car and takes pictures of crossings infront of the car*

**Specific Objectives**

*List the specific objectives of your project (Maximum length 300 words).*

* Create a code to detect zebra crossings
* Pick and train a deep learning net to classify if people or animals are crossing

**Methodology**

*Discuss the main methodological approaches that you are planning to use to tackle the objectives described in the previous section. Relate the selected methodology to the contents of the* ***Computer Vision*** *course (Maximum length 500 words).*

- Split the work between the group members

- Regularly discussion on the actual status of our sub tasks to tackle challenges quickly and together.

- Usea the methods we learned in our Course so far to create a Matlab Code to detect Zerba Crossings

**Work plan**

*List the tasks (with a very brief description of them) that you are planning to carry out every week and relate each of them to the main objectives of the project. List the milestones that you are willing to achieve and the deliverables that you will submit for obtaining feedback.*

|  |  |  |
| --- | --- | --- |
| **Week** | **Tasks** | **Milestones and deliverables** |
| **1** | **Create a git repository to organize the project** |  |
| **1** | **Organize the group and think of subtasks** | **29.11.23** |
| **1** | **Acquire pictures to train and test later algorithms** | **Due to 03.12.23** |
| **1** | **Search for a good deep learning model**  **(deepnet or Keras)** | **Due to 03.12.23 (Nico & Yann)** |
|  | **Implement the Crossing detection in Matlab (use knowledge from former projects)** | **Due to 10.12.23 (Tobi & Jan)** |
| **2** | **Train the net to recognize zebra crossings and people on it** | **Due to 10.12.23 (Nico & Jan)** |
| **4** |  |  |
| **5** |  |  |

**References**

*Provide the main references related to you project (Maximum 10 references).*

**Ethical issues**

*If the project that you are intending to carry out raises ethical issues, discuss how you are intending to tackle them. Otherwise, state why it does not raise any kind of ethical issues (Maximum length 150 words).*

* How are we handling the pictures of people crossing the street?