CMPE491 - Senior Project I

Project Proposals

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Project Subject:

As the subject of the graduation project, we focused on the subject of work accidents, which can be experienced a lot in our daily lives and even frequently encountered in the news and social media. Our starting point in this project was to develop a system for the safety of people who have heavy work. The project under consideration is an image processing and artificial intelligence based project. Our project is intended to be created using "Face Recognition System" and "Object Detection" technologies within the framework of the main headings.

In our project, face recognition is performed by going in front of the camera first. Thanks to this face recognition, information such as the person's name, surname, age, unit, what he does here are displayed on the screen. In this way, it is understood and recognized that the person works there. If the person's information cannot be accessed during face recognition, the person is not allowed to pass and it is reported on the screen that it does not work here. In this way, the entry of foreigners from outside is prevented. When the first stage face recognition, is passed, the second stage object detection, begins. At this stage, it is checked whether there are tools such as protective helmets, lanterns, ropes, which are mandatory for the employee to use and wear. If there is all the equipment that is registered in the system, that is, it should be allowed to pass. Apart from these, the right of way is not given on the items that are dangerous to wear. (Wearing a necklace in a job with cutting tools can become entangled in the tool, resulting in fatal accidents) Even if one of the tools to be worn is missing, it is not allowed to pass.

Thanks to all these, it is aimed that the employees will be affected in a way that will be minimized in all possible accidents and that the employer can better follow the employees.