|  |  |
| --- | --- |
|  | **HASAN KALYONCU UNIVERSITY****Computer Engineering Department****COME 499 Project Proposal Form** |

**Part I. Project Proposer**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name Lastname** | **Assist. Prof. Dr. Saed ALQARALEH** | **E-mail** | **saed.alqaraleh@hku.edu.tr** |
| **Company Information****(If you have collaboration with a company)** |  |

**Part II. Project Information**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Starting Term** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2 | 0 | 2 | 2 | / | 2 | 0 | 2 | 3 |

 |
| **Title of the Project** | A Crimes Tools Detection System using Deep Learning |
| **Project Description** |
| The quick and accurate identification of criminal activity is paramount to securing any residence. With the rapid growth of smart cities, the integration of crime detection systems seeks to improve this security. In the past, a strong reliance has been put on standard video surveillance to achieve this goal. This often creates a backlog of video data that must be monitored by a supervising official. For large urban areas, this creates an increasingly large workload for supervising officials which leads to an increase in error rate. Solutions have been implemented to help reduce the workload. However, with the improvement in CNN-based models, auto crimes tools Detection System models that can detect tools that can be used in crimes and inform people in charge to prevent possible crimes is currently a possible solution.In this project, we will propose a solution that uses neural networks to analyze video stream data. Our system will be able to quickly identify and assess criminal activity which will in turn reduce workloads on the supervising officials. When implemented across smart city infrastructure it will allow for an efficient and adaptable crime detection system. |
| **Project Justification** |
| **Novelty** |
| **New aspects** | There are a few studies for crimes tools detection, but they are still in the preliminary stage. This study will deeply investigate the efficiency of deep learning in building a crime tools detection system using deep learning. |
| **Complexity** |
| **Challenging problems and issues** | The student will learn the principle of deep learning. |
| **Related computer science fields and subfields** | Machine Learning, Deep Learning. |
| **Tools** | Python |
| **Risk involved** |
| **Potential problems and alternative solutions** | The number of available samples is a problem, however, a new dataset can be created in a short period. |
| **Minimum work required** | 6 months. |