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

**Part I. Project Proposer**

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

**Part II. Project Information**

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| **Starting Term** | |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 2 | 0 | 2 | 2 | / | 2 | 0 | 2 | 3 | |
| **Title of the Project** | Sentiment Analysis System For Images |
| **Project Description** | |
| Sentiment analysis or opinion mining approaches work on determining whether the input, which can be text and/or images is positive, negative, or neutral. The usage of Sentiment Analysis is getting popular thanks to appealing to many different working areas. Sentiment analysis uses image processing, machine learning algorithms and NLTK (Natural Language Toolkit). The data obtained from customers’ or users’ responses like images and text(tweets, comments, feedback) is used as the input of SA to help in improving marketing service.  In this project, we will propose a solution that uses neural networks to classify people's feelings based on their images. | |
| **Project Justification** | |
| **Novelty** | |
| **New aspects** | In our project, we will be creating an SA system that utilizes machine learning to efficiently analyze people's feelings using their images. Then we will build a web application that is allowing users to upload an image and make a decision about whether it is positive, negative, or neutral. |
| **Complexity** | |
| **Challenging problems and issues** |  |
| **Related computer science fields and subfields** | Machine Learning, Sentiment Analysis |
| **Tools** | Python and Python Libraries Pandas, Numpy etc., |
| **Risk involved** | |
| **Potential problems and alternative solutions** | * incapability to deal with complex images and inadequate accuracy. As a solution, the performance of multiple state-of-the-art Machine Learning algorithms will be investigated to find the most suitable one. |
| **Minimum work required** | * Adequate knowledge and ability related to Python programming language. * Group work |