Project Initiation Document

**KV6003– Individual Project**

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| Student Name | **Family Name**  **Neagu** | **Other names**  **Alexandru-Adonis** | **Usually known as**  **Alex** |

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| **Project Supervisor:** Dr Ossama Alshabrawy |
| **Aim of project:**  **This project aims to develop a program using machine learning/deep learning that is capable to automatically detect and interpret the emotions expressed by a human face.** |
| **Rationale for project:**  **Understanding the emotion of the people has a widespread consequence for society and business. A program like this could be implemented in airports to help detect terrorist activity or drug traffickers. Also, some companies are looking forward to using facial emotion recognition to evaluate the reaction of the people when they reveal a product predicting the level of customer satisfaction.** |
| **The main challenge is:**  **- Acquiring well-labelled training data.**  **- Identifying facial features** |
| **Type of product to be produced or investigative work to be undertaken:**  **The product is going to be a system that is using well trained data and feature identification to achieve highly accurate emotion detection on a human face.** |
| **Resources required:**  **- Machine learning/Deep Learning packages in python (Scikit-learn, tensorflow, keras)**  **- Imagine datasets (AffectNet dataset)**  **- Books**  **- Research papers** |
| **Any external body involved? If so, who?**  **N/A** |
| **Signatures:**  **Student: Supervisor:** |