Project Roles & Responsibilities

Project Title: CUDA-based Acceleration of the Viola-Jones Algorithm
Team Members:
Ibrahim Binmahfood
Kunjan Vyas
Robert Wilcox

Individual Contributions:

- Robert Wilcox:
    - Implemented the initial CUDA kernels for parallelizing the Viola-Jones algorithm
    - Integrated CUDA Unified Memory for simplified memory management
    - Designed and implemented the overall structure for CUDA-based acceleration

- Ibrahim Binmahfood:
    - Ported the original Viola-Jones code from Linux to Windows, addressing platform-specific issues.
    - Ported code base to Google Colab's environment
    - Implemented Makefile build system to handle CPU-based Viola Jones library and CUDA-based Viola Jones source code.
    - Automated Tests

- Kunjan Vyas:
    - Contributed to the overall project design and testing
    - Assisted in testing of the CUDA and serial implementation in Google colab
    - Curated a data-set of images and modified labels to make the parsing of parameters such as actual number of faces, detected faces and time taken easy
    - Wrote a pre-processing script to analyze and pictorially represent the data.