**Project Synopsis/Project Concept Document**

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| Project number | 46 |
| Project Title | Automatically apply AI filters to a photo in order to enhance it and make it look professionally edited. |
| Document | DASS Project Concept Document |
| Creation date | 18 Jan 2022 |
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| Client | JollyAI - Jaya Bharadwaj (director) |

**Description**

Photographers spend a lot of time selecting and editing their photos. This project aims to automate this process in order to reduce the time and effort spent on it.

The goal is to build and train a ML model that takes as input images, and outputs enhanced images with adjusted brightness, sharpness, saturation etc.

**Profile of Users**  
The project is currently only targeted towards professional photographers, who have to go through several thousands of photos, and with this product they can quickly edit each photo instantaneously. The product is not for common people to use. The current focus of the project is on wedding photos.

**Feature highlights**

We will reproduce and train 4 models - [CURL](https://github.com/sjmoran/CURL), [CWCC](https://github.com/firasl/CWCC), [EnlightenGAN](https://github.com/VITA-Group/EnlightenGAN), [MIRNet](https://github.com/swz30/MIRNet).

The models will be trained on [Adobe fiveK](https://data.csail.mit.edu/graphics/fivek/) data set along with a data set of wedding photos provided by the client.

The model which performs the best will be selected by the client.

**Usage Model and Diagrams (if any)**

Currently, the sole objective of the project is to reproduce and train the models, we will be training them using the GPUs provided by the client (1080ti, 2060ti, 3060ti). If time permits, the client may choose to give further tasks involving a larger software system that the models fit into. The details of how user flow will be made clear then. As of now, this remains beyond the scope of the project. The product will just be a trained neural network as of now, and since this will not involve interaction with users, no flowchart is essential.