Course Year/Semester: 2020-2021 (Spring Semester)

Project Title: IMAGE INPAINTING WITH DEEP LEARNING

Objectives:

- Our primary goal is to implement different inpainting approaches/algorithms developed as solutions to existing problems and compare their performance in different datasets. Then, the algorithm with the most successful results will be optimized and developed.

- Finally, masking and different inpainting methods will be put together with a pipeline and the image taken from the user will be taken as input ant the output image will be purified from the artifacts.

Advisor(s):

- Prof. Dr. Ender Mete EKŞİOĞLU

Team members:

- Enes DEMİRAĞ - 040160027
- Halil İbrahim BENGÜ - 040160053

Monthly Progress Report
(To be filled jointly by project group members)

Objectives:
1. To identify actions
2. To review actions and progress from last period.
3. To choose action items for next period.

1. Performance Details:

Month	Actions	Comments & conclusions Justification, explanation and things learned	Date & Advisor sign.
0-2	• Literature Review • Research about Inpainting methods • Research about Deep Learning Frameworks.	Literature research and determination of the methods to be used were determined as the first task phase. This task is the responsibility of all students.	Approved By e-mail 1.30.2021
2-5	• Preparation and implementation of different inpainting approaches	Edge-Connect, Deep Image Prior, Generative CNN models are studied deeply. Official example codes are investigated and implemented accordingly. Trained networks are tested and results are compared. Different datasets are examined and python script is written to train them with different models. Github repository is created to develop our project as open source.	Approved By e-mail 1.30.2021
5-8	• Creating a pipeline and putting together the segmentation and the inpainting phases. • Performing fine-tuning and trying to optimize the processes	All team members will work together in the merging all the work into a pipeline. Fine-tuning process will be done by changing various hyper parameters and trying to optimize the tasks while applying different datasets and observing the results	Approved By e-mail 1.30.2021

8-9	• Preparing the project report • Preparation charts and tables	All team members will complete the thesis writing section through the data collected and documentation created until this stage. A detailed scientific explanation is being done for the final report, explaining step by step how and why the experiment is followed with those steps. Also, future research possibilities will be left open at the last part.	Approved By e-mail 1.30.2021