College of Engineering Chengannur Department of Computer Engineering M. Tech. Computer Science(Image Processing)

03CS6902 Mini Project

Periodic Report No. 11 (For the period 25/08/2021 to 31/08/2021) PixelRL: Fully Convolutional Network with Reinforcement Learning for Image Processing CHN20CSIP01 GOWRI B NAIR

1 Work Assigned

Prepare for design presentation

Work Done 2

Prepared design of the project and analyzed algorithm of the project.

3 Discussion of Design Presentation

1) Suggested to rewrite the problem statement according to problem specific

Corrected as: Develop an effective method for basic image processing operation that requires pixel-wise manipulation such as image denoising, image restoration, local color enhancement etc.

2) Suggested to rewrite the proposed solution according to the problem statement

Corrected as: The proposed solution is pixelRL for image processing. PixelRL is a multiagent RL problem, where each pixel has an agent. The agents learn the optimal behavior to maximize the mean of the expected total rewards at all pixels. Each pixel value is regarded as the current state and is iteratively updated by the agent's action. The proposed pixelRL is applied to image denoising.

3) Suggested to included the proper work schedule.

Corrected as: Below are the work assigned for period (26/04/2021 to 01/05/2021)

1. Identifying project domain

Below are the work assigned for period (02/05/2021 to 11/05/2021)

1. Identifying project topic based on domain

Below are the work assigned for period (12/05/2021 to 22/05/2021)

1. Identifying project topic and suitable journal

Below are the work assigned for period (23/05/2021 to 31/05/2021)

1. Preparation for IC of Project and Selection of guide

Below are the work assigned for period (01/06/2021 to 10/06/2021)

1. Conduct literature survey on related work of project

Below are the work assigned for period (11/06/2021 to 20/06/2021)

- 1. Detailed Study of project.
- 2. Make design of project.

Below are the work assigned for period (01/08/2021 to 10/08/2021)

1. Preparation for design presentation

Below are the Work assigned for the period (11/08/2021) to (24/08/2021)

1. Preparation of design of the project.

Below are the Work assigned for the period (25/08/2021) to (31/08/2021)

1. Understanding algorithm of the project.

Below are the Work assigned for the period (01/09/2021) to (10/09/2021)

- 1. Preparation for the implementation.
- 2. First step for implementation.

Below are the Work assigned for the period (11/09/2021) to (21/09/2021)

1. Further implementation.

4) Question asked what are the properties of pixel

Answer: Intensity, brightness, color etc

5) Question asked which property is used in project

Answer: Intensity

4 Work Schedule for Next 10 Days

Approval for implementation Start of implementation of project

5 Assessment of Guide

Performance assessment & Remarks by the guide: Poor/Acceptable/Satisfactory/Good/Very Good/Excellent Name & dated signature of the guide: