Artificial Intelligence

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Class ID: 106266

Course Teacher: Sir Siraj Munir

Project Name: Image denoising

1. INTRODUCTION

Image denoising refers to the recovery of a digital image that has been contaminated by noise. The presence of noise in images is unavoidable. It may be introduced during image formation, recording or transmission phase. Further processing of the image often requires that the noise must be removed or at least reduced.

2. PROJECT DETAILS

The AC-PT algorithm starts by estimating the noise level
as an important parameter for noise reduction. Then, adaptive clustering is applied to the stacked patches to group
similar patches together. Each cluster matrix is processed
with progressive two-step denoising: MP-SVD and LMMSE
denoising.

PEAS

PEAS	Detail
P	This means that each pixel in the noisy image is the sum of the true pixel value and a random Gaussian distributed noise value.
E	Image denoising is an active area of research and probably.
A	Experimental results show that the proposed algorithm can effectively remove the image noises with less processing time as compared with the state-of-the-art denoising algorithm.
S	Edge structure preserving image denoising.

ENVIRONMENT TYPE

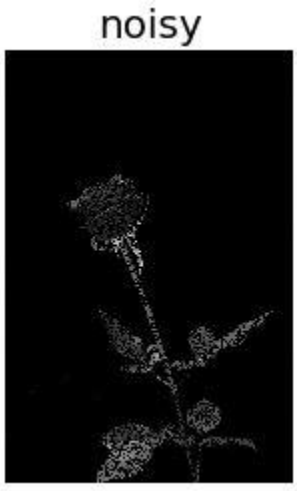
Deterministic / Stochastic	**Fully / Partially Observable**	**Episodic / Sequential**	**Static / Dynamic /Semi Dynamic**	**Discrete / Continuous**	**Single / Multi agent**	**Known / Un Known**
YES	YES	NO	NO	YES	YES	YES

AGENT TYPE

Applicable Type	Reason
Simple	Spatial Filtering
Reflex	Transform Domain
Goal	Reduce Noise
Utility	
Learning	Wavelet Thresholding Method.

AGENT ORGANIZATION

Applicable Organization Type	Reason
Atomic	
Structures	
Factored	

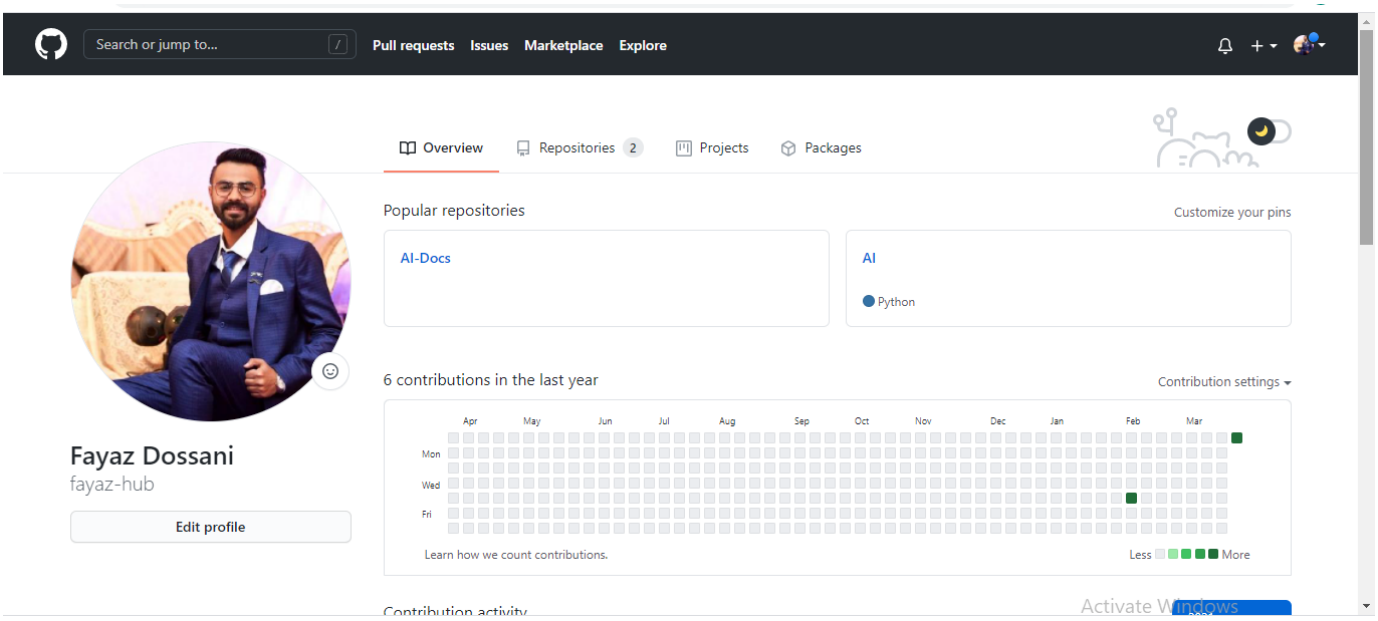


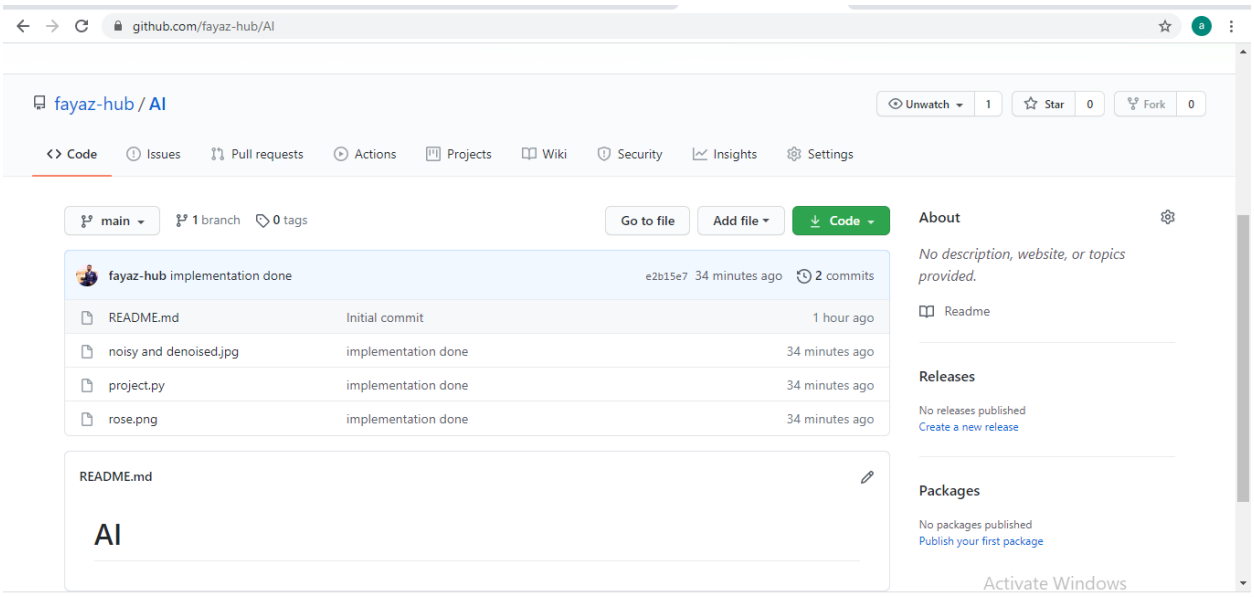
4. PROJECT CONCLUSION

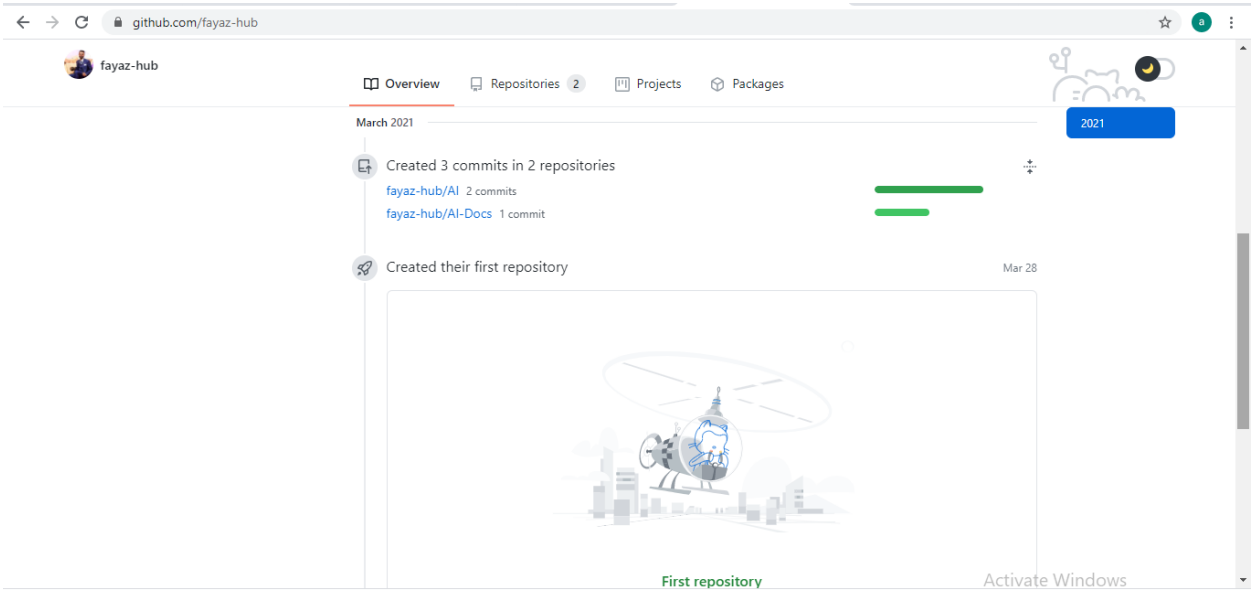
Enhancement of an noisy image is necessary task in image processing. Filters are used best for removing noise from the images. The decision to apply a which particular filter is based on the different noise level at the different test pixel location or performance of the filter scheme on a filtering mask.

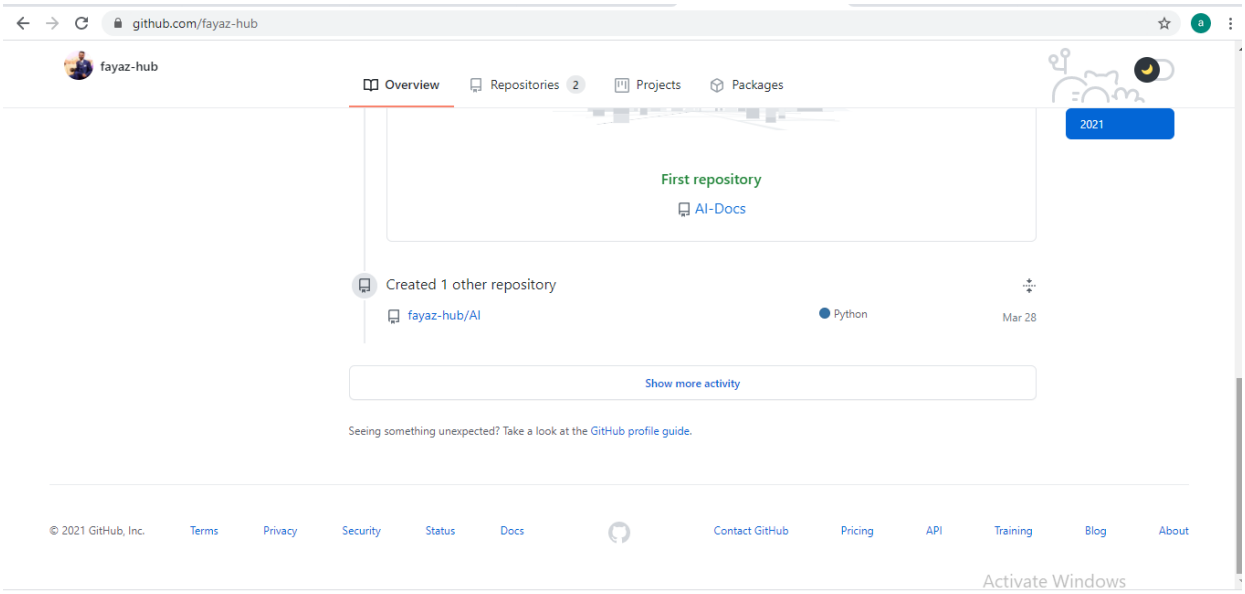
GITHUB LINK

https://github.com/fayaz-hub/AI




github.com/fayaz-hub/AI
fayaz-hub / AI
Unwatch 1
Star 0
Fork 0
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
main
1 branch
0 tags
Go to file
Add file
Code
fayaz-hub implementation done
e2b15e7 34 minutes ago
2 commits
README.md Initial commit 1 hour ago
noisy and denoised.jpg implementation done 34 minutes ago
project.py implementation done 34 minutes ago
rose.png implementation done 34 minutes ago
README.md
AI
About
No description, website, or topics provided.
Readme
Releases
No releases published
Create a new release
Packages
No packages published
Publish your first package
Activate Windows


github.com/fayaz-hub
fayaz-hub
Overview
Repositories 2
Projects
Packages
2021
March 2021
Created 3 commits in 2 repositories
fayaz-hub/AI 2 commits
fayaz-hub/AI-Docs 1 commit
Created their first repository
Mar 28
First repository
Activate Windows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Overview
Repositories 2
Projects
Packages
2021
First repository
AI-Docs
Created 1 other repository
fayaz-hub/AI
Python
Mar 28
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