# Digital Image Processing
# Mid Evaluation Report
## Team: Mob_Psycho

**Project Title:** Fast Weighted Median Filtering
**Project ID:** 12 [Link]

### Github Link
https://github.com/Kanav-7/DIP-Project

### Team Members
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### Tasks Done
- Complete understanding of research paper
- Implemented Joint Histogram using Necklace Table
- Implemented Balance Counting Box for maintaining weight balance at each filter window
- Implemented updating functionalities for both of above mentioned data structures as the window progresses
- Feature map weighted using exponential function. (Unweighted also done)

### Sample Images and obtained outputs

### Image 1

### Input Image

**Output (Using weighted median filtering with radius=1)**

**Output (Using weighted median filtering with radius=2)**

**Output (Using Unweighted median filtering with radius = 1)**

**Output (Using Unweighted median filtering with radius = 3)**

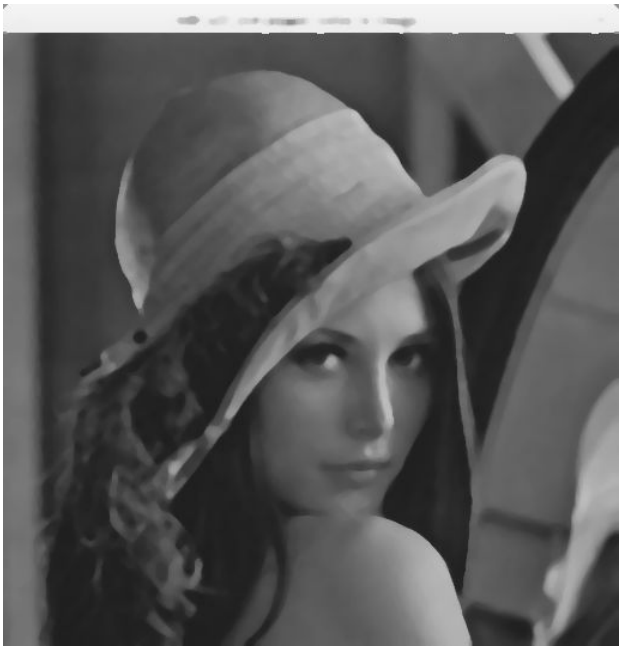
## Image 2

## Output (Using weighted median filtering with radius=1)


## Output (Using weighted median filtering with radius=2)

## Output (Using unweighted median filtering with radius=1)


## Output (Using unweighted median filtering with radius=3)



**Milestones Left**

- Currently intensities of image are considered as feature matrices, extend it for any feature matrix of choice (eg. color or any high level function as in paper)
- Implement weighting based on parameters other than exponential
- Find and fix the existing bugs (Sometimes code gives segmentation fault)
- Understanding how this algorithm works for colored images and extending our implementation to include those (Though nothing major is given in research paper about this)
- Testing out code on various types of images (As of now testing is done only on salt and pepper images)
- Comparison of speed and output accuracy with normal weighted median filter