Resources :-

http://people.csail.mit.edu/vladb/photoadjust/ (GPR is too computationally intensive, so it is better to go for gradient descent or LASSO(need to be studied)

https://github.com/yuukicammy/mit-adobe-fivek-dataset
(Code related to 5K)

https://github.com/mahmoudnafifi/Exposure_Correction?tab=readme-ov-file

https://github.com/mahmoudnafifi/Deep_White_Balance

https://github.com/collinswakholi/ML_ColorCorrection_tool - Issues in code (wasted 2-3 days)

https://paperswithcode.com/task/image-enhancement(It is Very good and Having Multiple resources)

5k:
https://paperswithcode.com/paper/retinexformer-one-stage-retinex-based
https://arxiv.org/pdf/2303.06705v3.pdf
https://github.com/caiyuanhao1998/Retinexformer
https://zhuanlan.zhihu.com/p/657927878

https://arxiv.org/pdf/1911.13175v4.pdf
https://github.com/sjmoran/CURL?tab=readme-ov-file

https://github.com/mahmoudnafifi/WB_sRGB (Best candidate yet)

https://openaccess.thecvf.com/content_CVPR_2019/papers/Afifi_When_Color_Constancy_Goes_Wrong_Correcting_Improperly_White-Balanced_Images_CVPR_2019_paper.pdf

(its Paper)

To Understand mahmoudnafifi WB repo:

https://chat.openai.com/share/da34cace-0416-4871-96dc-14e3d71f8005

- Used For white balance only

If we Implement on ourselves

https://chat.openai.com/share/a2d4f6cb-5e9d-4b26-b7e4-e528ba0b9e61

https://chat.openai.com/share/9b4a7d68-c4e6-450a-9c84-e58dd646c115

Tasks:-

Harsh:
- CNN study
- Check How to Do ML on large Datasets
- See above two chatGpt links And make them Work
- Done With reading Papers and repo
  ☹ - Kuch fayeda nhi hota bahut detail me hoti h . samajh ne pura din jata h. Fir unka codebase samajh nhi aata . we can do this only to check weather it run or not. Aur apne project se thode deviated topic pe hote h
- histogram equalization - Just Equlizing CDF kind of thing in grey scale Improves image (No ML)
- gamma correction

Awasthi-
- Check Wb of Nabi on Multiple photos
- CNN, BIQA- Study
- See SSIM on This nabi repo

- Study 5k paper , repo and try to ImpIment that

Sujal-
- Run this repo whether it works or not (its paper studied - Harsh) https://github.com/caiyuanhao1998/Retinexformer?tab=readme-ov-file
- https://github.com/subpic/koniq (Shyad same si hi h ye bhi https://github.com/ZhengyuZhao/koniq-PyTorch
-

Nice Small Dataset (
https://www.dropbox.com/sh/0mwco5wftcr7vl0/AACgPpmi5j8t9qZcfvOsvZn4a?e=1&dl=0

- LOW light enhancement
  https://www.youtube.com/watch?v=b5Uz_c0JLMs&ab_channel=BhaveshBhatt
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