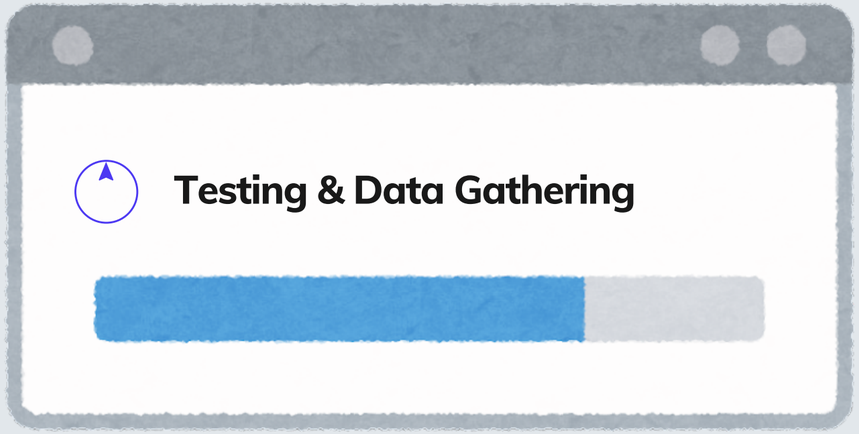
Progress Report

January 19, 2022

JOHN BENEDICT DU



PROGRESS SO FAR

Training Results

PSNR & SSIM
Validation

Testing using SOTS
& CVPR

Training Results

```
Date: 2022-01-16 16:59:45s, Time_Cost: 4457s, Epoch: [1/20], Train_PSNR: 21.98
Date: 2022-01-16 18:05:56s, Time_Cost: 3971s, Epoch: [2/20], Train_PSNR: 24.57
Date: 2022-01-16 19:14:19s, Time_Cost: 4103s, Epoch: [3/20], Train_PSNR: 25.54
Date: 2022-01-16 20:22:16s, Time_Cost: 4077s, Epoch: [4/20], Train_PSNR: 26.11
Date: 2022-01-16 21:27:21s, Time_Cost: 3904s, Epoch: [5/20], Train_PSNR: 26.66
Date: 2022-01-16 22:31:06s, Time_Cost: 3826s, Epoch: [6/20], Train_PSNR: 27.06
Date: 2022-01-16 23:34:17s, Time_Cost: 3790s, Epoch: [7/20], Train_PSNR: 27.42
Date: 2022-01-17 00:37:28s, Time_Cost: 3791s, Epoch: [8/20], Train_PSNR: 27.74
Date: 2022-01-17 01:40:23s, Time_Cost: 3775s, Epoch: [9/20], Train_PSNR: 28.00
Date: 2022-01-17 02:43:37s, Time_Cost: 3794s, Epoch: [10/20], Train_PSNR: 28.27
Date: 2022-01-17 03:46:36s, Time_Cost: 3779s, Epoch: [11/20], Train_PSNR: 28.52
Date: 2022-01-17 04:49:57s, Time_Cost: 3801s, Epoch: [12/20], Train_PSNR: 28.73
Date: 2022-01-17 05:52:53s, Time_Cost: 3776s, Epoch: [13/20], Train_PSNR: 28.94
Date: 2022-01-17 06:55:51s, Time_Cost: 3778s, Epoch: [14/20], Train_PSNR: 29.09
Date: 2022-01-17 07:58:44s, Time_Cost: 3773s, Epoch: [15/20], Train_PSNR: 29.25
Date: 2022-01-17 09:01:52s, Time_Cost: 3788s, Epoch: [16/20], Train_PSNR: 29.39
Date: 2022-01-17 10:11:51s, Time_Cost: 4199s, Epoch: [17/20], Train_PSNR: 29.48
Date: 2022-01-17 11:21:59s, Time_Cost: 4208s, Epoch: [18/20], Train_PSNR: 29.54
Date: 2022-01-17 12:34:05s, Time_Cost: 4326s, Epoch: [19/20], Train_PSNR: 29.58
Date: 2022-01-17 13:47:06s, Time_Cost: 4380s, Epoch: [20/20], Train_PSNR: 29.60
```

PSD AECR-Net

Epoch	1	2	3	4	5	6	7	8	9	10
PSNR	24.18	25.11	26.68	26.34	25.08	26.65	26.97	26.32	26.59	26.40
SSIM	0.9246	0.9370	0.9499	0.9498	0.9407	0.9531	0.9563	0.9468	0.9517	0.9421

Epoch	11	12	13	14	15	16	17	18	19	20
PSNR	27.03	26.29	26.46	**27.31**	26.42	27.14	26.92	26.57	26.78	26.71
SSIM	**0.9568**	0.9491	0.9493	0.9562	0.9458	0.9519	0.9504	0.9485	0.9503	0.9500

02

PSNR & SSIM Validation

- RESIDE SOTS outdoor dataset
- Built-in PSNR & SSIM
- Used upsampling to match dimensions

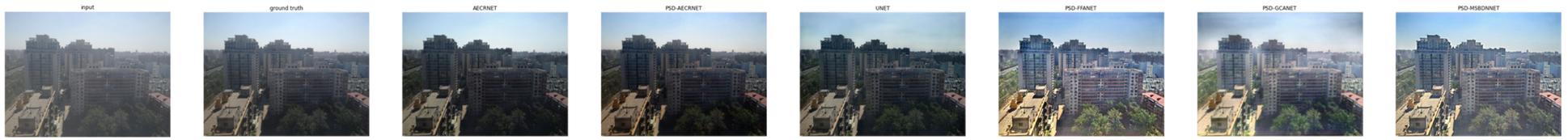
Model	U-Net	AECR-Net	PSD FFA-Net	PSD GCA-Net	PSD MSBDN-Net
PSNR	19.02	25.28	15.00	14.72	15.18
SSIM	0.8696	0.9350	0.7498	0.7773	0.7656

Testing using SOTS & CVPR

Testing Setup

- A-Net enabled
- Python Notebook
- All Models
- Output Figures

SOTS



CVPR

Project Plan

JAN 8 - 11	JAN 12 - 14	JAN 15 - 17	JAN 18 - 19	JAN 20 - 21
Setup Local Python Environment	Study & Get AECR-Net to Work		Testing & Debugging	
Download RESIDE Dataset	Study & Get Principled S2R Dehazing to Work		Data Gathering	
	Modify AECR-Net to work as PSD backbone		Code Clean Up & Documentation	
		Train Model with RESIDE Dataset		Final Report

Thank you!