Dataset contains 255 images and 255 masks.

0%| | 0/6 [00:00<?, ?it/s]

Training Epoch: 0%| | 0/26 [00:00<?, ?it/s]

Training Epoch: 4%|▍ | 1/26 [00:01<00:31, 1.27s/it]Training Epoch: 8%|▊ | 2/26 [00:02<00:35, 1.49s/it]Training Epoch: 12%|█▏ | 3/26 [00:04<00:36, 1.57s/it]Training Epoch: 15%|█▌ | 4/26 [00:06<00:35, 1.60s/it]Training Epoch: 19%|█▉ | 5/26 [00:07<00:34, 1.63s/it]Training Epoch: 23%|██▎ | 6/26 [00:09<00:32, 1.64s/it]Training Epoch: 27%|██▋ | 7/26 [00:11<00:31, 1.65s/it]Training Epoch: 31%|███ | 8/26 [00:12<00:29, 1.67s/it]Training Epoch: 35%|███▍ | 9/26 [00:14<00:28, 1.68s/it]Training Epoch: 38%|███▊ | 10/26 [00:16<00:27, 1.69s/it]Training Epoch: 42%|████▏ | 11/26 [00:18<00:25, 1.70s/it]Training Epoch: 46%|████▌ | 12/26 [00:19<00:23, 1.71s/it]Training Epoch: 50%|█████ | 13/26 [00:21<00:22, 1.72s/it]Training Epoch: 54%|█████▍ | 14/26 [00:23<00:20, 1.73s/it]Training Epoch: 58%|█████▊ | 15/26 [00:25<00:19, 1.74s/it]Training Epoch: 62%|██████▏ | 16/26 [00:26<00:17, 1.74s/it]Training Epoch: 65%|██████▌ | 17/26 [00:28<00:15, 1.75s/it]Training Epoch: 69%|██████▉ | 18/26 [00:30<00:14, 1.76s/it]Training Epoch: 73%|███████▎ | 19/26 [00:32<00:12, 1.76s/it]Training Epoch: 77%|███████▋ | 20/26 [00:33<00:10, 1.77s/it]Training Epoch: 81%|████████ | 21/26 [00:35<00:08, 1.77s/it]Training Epoch: 85%|████████▍ | 22/26 [00:37<00:07, 1.77s/it]Training Epoch: 88%|████████▊ | 23/26 [00:39<00:05, 1.77s/it]Training Epoch: 92%|█████████▏| 24/26 [00:40<00:03, 1.76s/it]Training Epoch: 96%|█████████▌| 25/26 [00:42<00:01, 1.75s/it]Training Epoch: 100%|██████████| 26/26 [00:44<00:00, 1.70s/it]

Train epoch took 44.1408 seconds

Validating Epoch: 0%| | 0/7 [00:00<?, ?it/s]

Validating Epoch: 14%|█▍ | 1/7 [00:01<00:07, 1.19s/it]Validation Step 1 took 0.7669 seconds

Validating Epoch: 29%|██▊ | 2/7 [00:01<00:04, 1.08it/s]Validation Step 2 took 0.6285 seconds

Validating Epoch: 43%|████▎ | 3/7 [00:02<00:03, 1.18it/s]Validation Step 3 took 0.6362 seconds

Validating Epoch: 57%|█████▋ | 4/7 [00:03<00:02, 1.09it/s]Validation Step 4 took 0.6240 seconds

Validating Epoch: 71%|███████▏ | 5/7 [00:04<00:01, 1.18it/s]Validation Step 5 took 0.6232 seconds

Validating Epoch: 86%|████████▌ | 6/7 [00:05<00:00, 1.08it/s]Validation Step 6 took 0.6213 seconds

Validating Epoch: 100%|██████████| 7/7 [00:05<00:00, 1.20it/s]

17%|█▋ | 1/6 [00:49<04:09, 49.98s/it]Validation Step 7 took 0.2472 seconds

Validation epoch took 5.8398 seconds

Validation IoU: 0.7366, DSC (F1): 0.8471, Pixel Accuracy: 0.7326

Epoch 1 total time: 49.9822 seconds

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Train Loss EPOCH 1: 0.6026

Valid Loss EPOCH 1: 0.5518

Validation Metrics - IoU: 0.7366, DSC (F1): 0.8471, Pixel Accuracy: 0.7326

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Training Epoch: 0%| | 0/26 [00:00<?, ?it/s]

Training Epoch: 4%|▍ | 1/26 [00:00<00:18, 1.34it/s]Training Epoch: 8%|▊ | 2/26 [00:02<00:31, 1.32s/it]Training Epoch: 12%|█▏ | 3/26 [00:04<00:34, 1.49s/it]Training Epoch: 15%|█▌ | 4/26 [00:05<00:34, 1.57s/it]Training Epoch: 19%|█▉ | 5/26 [00:07<00:33, 1.62s/it]Training Epoch: 23%|██▎ | 6/26 [00:09<00:32, 1.65s/it]Training Epoch: 27%|██▋ | 7/26 [00:10<00:31, 1.66s/it]Training Epoch: 31%|███ | 8/26 [00:12<00:30, 1.68s/it]Training Epoch: 35%|███▍ | 9/26 [00:14<00:28, 1.68s/it]Training Epoch: 38%|███▊ | 10/26 [00:16<00:27, 1.69s/it]Training Epoch: 42%|████▏ | 11/26 [00:17<00:25, 1.69s/it]Training Epoch: 46%|████▌ | 12/26 [00:19<00:23, 1.68s/it]Training Epoch: 50%|█████ | 13/26 [00:21<00:21, 1.67s/it]Training Epoch: 54%|█████▍ | 14/26 [00:22<00:20, 1.67s/it]Training Epoch: 58%|█████▊ | 15/26 [00:24<00:18, 1.66s/it]Training Epoch: 62%|██████▏ | 16/26 [00:26<00:16, 1.66s/it]Training Epoch: 65%|██████▌ | 17/26 [00:27<00:14, 1.66s/it]Training Epoch: 69%|██████▉ | 18/26 [00:29<00:13, 1.66s/it]Training Epoch: 73%|███████▎ | 19/26 [00:31<00:11, 1.66s/it]Training Epoch: 77%|███████▋ | 20/26 [00:32<00:09, 1.66s/it]Training Epoch: 81%|████████ | 21/26 [00:34<00:08, 1.66s/it]Training Epoch: 85%|████████▍ | 22/26 [00:35<00:06, 1.66s/it]Training Epoch: 88%|████████▊ | 23/26 [00:37<00:04, 1.66s/it]Training Epoch: 92%|█████████▏| 24/26 [00:39<00:03, 1.66s/it]Training Epoch: 96%|█████████▌| 25/26 [00:40<00:01, 1.66s/it]Training Epoch: 100%|██████████| 26/26 [00:42<00:00, 1.63s/it]

Train epoch took 42.3632 seconds

Validating Epoch: 0%| | 0/7 [00:00<?, ?it/s]

Validating Epoch: 14%|█▍ | 1/7 [00:01<00:06, 1.14s/it]Validation Step 1 took 1.0155 seconds

Validating Epoch: 29%|██▊ | 2/7 [00:01<00:04, 1.12it/s]Validation Step 2 took 0.6100 seconds

Validating Epoch: 43%|████▎ | 3/7 [00:02<00:03, 1.23it/s]Validation Step 3 took 0.6108 seconds

Validating Epoch: 57%|█████▋ | 4/7 [00:03<00:02, 1.29it/s]Validation Step 4 took 0.6141 seconds

Validating Epoch: 71%|███████▏ | 5/7 [00:04<00:01, 1.32it/s]Validation Step 5 took 0.6084 seconds

Validating Epoch: 86%|████████▌ | 6/7 [00:04<00:00, 1.34it/s]Validation Step 6 took 0.6175 seconds

Validating Epoch: 100%|██████████| 7/7 [00:05<00:00, 1.39it/s]

33%|███▎ | 2/6 [01:37<03:13, 48.48s/it]Validation Step 7 took 0.2399 seconds

Validation epoch took 5.0619 seconds

Validation IoU: 0.7921, DSC (F1): 0.8836, Pixel Accuracy: 0.8075

Epoch 2 total time: 47.4263 seconds

------------------------------

Train Loss EPOCH 2: 0.5354

Valid Loss EPOCH 2: 0.4587

Validation Metrics - IoU: 0.7921, DSC (F1): 0.8836, Pixel Accuracy: 0.8075

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Training Epoch: 0%| | 0/26 [00:00<?, ?it/s]

Training Epoch: 4%|▍ | 1/26 [00:00<00:18, 1.38it/s]Training Epoch: 8%|▊ | 2/26 [00:02<00:31, 1.30s/it]Training Epoch: 12%|█▏ | 3/26 [00:04<00:33, 1.47s/it]Training Epoch: 15%|█▌ | 4/26 [00:05<00:34, 1.56s/it]Training Epoch: 19%|█▉ | 5/26 [00:07<00:33, 1.61s/it]Training Epoch: 23%|██▎ | 6/26 [00:09<00:32, 1.64s/it]Training Epoch: 27%|██▋ | 7/26 [00:10<00:31, 1.66s/it]Training Epoch: 31%|███ | 8/26 [00:12<00:30, 1.67s/it]Training Epoch: 35%|███▍ | 9/26 [00:14<00:28, 1.68s/it]Training Epoch: 38%|███▊ | 10/26 [00:15<00:26, 1.69s/it]Training Epoch: 42%|████▏ | 11/26 [00:17<00:25, 1.69s/it]Training Epoch: 46%|████▌ | 12/26 [00:19<00:23, 1.69s/it]Training Epoch: 50%|█████ | 13/26 [00:21<00:22, 1.69s/it]Training Epoch: 54%|█████▍ | 14/26 [00:22<00:20, 1.70s/it]Training Epoch: 58%|█████▊ | 15/26 [00:24<00:18, 1.70s/it]Training Epoch: 62%|██████▏ | 16/26 [00:26<00:16, 1.70s/it]Training Epoch: 65%|██████▌ | 17/26 [00:27<00:15, 1.70s/it]Training Epoch: 69%|██████▉ | 18/26 [00:29<00:13, 1.70s/it]Training Epoch: 73%|███████▎ | 19/26 [00:31<00:11, 1.70s/it]Training Epoch: 77%|███████▋ | 20/26 [00:32<00:10, 1.70s/it]Training Epoch: 81%|████████ | 21/26 [00:34<00:08, 1.70s/it]Training Epoch: 85%|████████▍ | 22/26 [00:36<00:06, 1.70s/it]Training Epoch: 88%|████████▊ | 23/26 [00:38<00:05, 1.69s/it]Training Epoch: 92%|█████████▏| 24/26 [00:39<00:03, 1.69s/it]Training Epoch: 96%|█████████▌| 25/26 [00:41<00:01, 1.69s/it]Training Epoch: 100%|██████████| 26/26 [00:42<00:00, 1.65s/it]

Train epoch took 42.8270 seconds

Validating Epoch: 0%| | 0/7 [00:00<?, ?it/s]

Validating Epoch: 14%|█▍ | 1/7 [00:01<00:06, 1.17s/it]Validation Step 1 took 1.0603 seconds

Validating Epoch: 29%|██▊ | 2/7 [00:01<00:04, 1.11it/s]Validation Step 2 took 0.6146 seconds

Validating Epoch: 43%|████▎ | 3/7 [00:02<00:03, 1.22it/s]Validation Step 3 took 0.6212 seconds

Validating Epoch: 57%|█████▋ | 4/7 [00:03<00:02, 1.26it/s]Validation Step 4 took 0.6196 seconds

Validating Epoch: 71%|███████▏ | 5/7 [00:04<00:01, 1.30it/s]Validation Step 5 took 0.6209 seconds

Validating Epoch: 86%|████████▌ | 6/7 [00:04<00:00, 1.32it/s]Validation Step 6 took 0.6176 seconds

Validating Epoch: 100%|██████████| 7/7 [00:05<00:00, 1.37it/s]

50%|█████ | 3/6 [02:25<02:24, 48.24s/it]Validation Step 7 took 0.2374 seconds

Validation epoch took 5.1179 seconds

Validation IoU: 0.8294, DSC (F1): 0.9055, Pixel Accuracy: 0.8597

Epoch 3 total time: 47.9462 seconds

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Train Loss EPOCH 3: 0.3841

Valid Loss EPOCH 3: 0.3052

Validation Metrics - IoU: 0.8294, DSC (F1): 0.9055, Pixel Accuracy: 0.8597

------------------------------

Training Epoch: 0%| | 0/26 [00:00<?, ?it/s]

Training Epoch: 4%|▍ | 1/26 [00:00<00:18, 1.34it/s]Training Epoch: 8%|▊ | 2/26 [00:02<00:31, 1.31s/it]Training Epoch: 12%|█▏ | 3/26 [00:04<00:33, 1.48s/it]Training Epoch: 15%|█▌ | 4/26 [00:05<00:34, 1.56s/it]Training Epoch: 19%|█▉ | 5/26 [00:07<00:33, 1.60s/it]Training Epoch: 23%|██▎ | 6/26 [00:09<00:32, 1.63s/it]Training Epoch: 27%|██▋ | 7/26 [00:10<00:31, 1.65s/it]Training Epoch: 31%|███ | 8/26 [00:12<00:29, 1.66s/it]Training Epoch: 35%|███▍ | 9/26 [00:14<00:28, 1.67s/it]Training Epoch: 38%|███▊ | 10/26 [00:15<00:26, 1.67s/it]Training Epoch: 42%|████▏ | 11/26 [00:17<00:25, 1.68s/it]Training Epoch: 46%|████▌ | 12/26 [00:19<00:23, 1.68s/it]Training Epoch: 50%|█████ | 13/26 [00:20<00:21, 1.68s/it]Training Epoch: 54%|█████▍ | 14/26 [00:22<00:20, 1.68s/it]Training Epoch: 58%|█████▊ | 15/26 [00:24<00:18, 1.68s/it]Training Epoch: 62%|██████▏ | 16/26 [00:26<00:16, 1.68s/it]Training Epoch: 65%|██████▌ | 17/26 [00:27<00:15, 1.68s/it]Training Epoch: 69%|██████▉ | 18/26 [00:29<00:13, 1.68s/it]Training Epoch: 73%|███████▎ | 19/26 [00:31<00:11, 1.68s/it]Training Epoch: 77%|███████▋ | 20/26 [00:32<00:10, 1.68s/it]Training Epoch: 81%|████████ | 21/26 [00:34<00:08, 1.68s/it]Training Epoch: 85%|████████▍ | 22/26 [00:36<00:06, 1.68s/it]Training Epoch: 88%|████████▊ | 23/26 [00:37<00:05, 1.68s/it]Training Epoch: 92%|█████████▏| 24/26 [00:39<00:03, 1.68s/it]Training Epoch: 96%|█████████▌| 25/26 [00:41<00:01, 1.68s/it]Training Epoch: 100%|██████████| 26/26 [00:42<00:00, 1.63s/it]

Train epoch took 42.4962 seconds

Validating Epoch: 0%| | 0/7 [00:00<?, ?it/s]

Validating Epoch: 14%|█▍ | 1/7 [00:01<00:06, 1.16s/it]Validation Step 1 took 1.0293 seconds

Validating Epoch: 29%|██▊ | 2/7 [00:01<00:04, 1.07it/s]Validation Step 2 took 0.6159 seconds

Validating Epoch: 43%|████▎ | 3/7 [00:02<00:03, 1.19it/s]Validation Step 3 took 0.6172 seconds

Validating Epoch: 57%|█████▋ | 4/7 [00:03<00:02, 1.26it/s]Validation Step 4 took 0.6194 seconds

Validating Epoch: 71%|███████▏ | 5/7 [00:04<00:01, 1.29it/s]Validation Step 5 took 0.6203 seconds

Validating Epoch: 86%|████████▌ | 6/7 [00:04<00:00, 1.31it/s]Validation Step 6 took 0.6196 seconds

Validating Epoch: 100%|██████████| 7/7 [00:05<00:00, 1.36it/s]

67%|██████▋ | 4/6 [03:13<01:36, 48.01s/it]Validation Step 7 took 0.2452 seconds

Validation epoch took 5.1718 seconds

Validation IoU: 0.8713, DSC (F1): 0.9306, Pixel Accuracy: 0.8901

Epoch 4 total time: 47.6692 seconds

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Train Loss EPOCH 4: 0.3439

Valid Loss EPOCH 4: 0.3015

Validation Metrics - IoU: 0.8713, DSC (F1): 0.9306, Pixel Accuracy: 0.8901

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Training Epoch: 0%| | 0/26 [00:00<?, ?it/s]

Training Epoch: 4%|▍ | 1/26 [00:00<00:18, 1.37it/s]Training Epoch: 8%|▊ | 2/26 [00:02<00:31, 1.30s/it]Training Epoch: 12%|█▏ | 3/26 [00:04<00:33, 1.47s/it]Training Epoch: 15%|█▌ | 4/26 [00:05<00:34, 1.56s/it]Training Epoch: 19%|█▉ | 5/26 [00:07<00:33, 1.61s/it]Training Epoch: 23%|██▎ | 6/26 [00:09<00:32, 1.63s/it]Training Epoch: 27%|██▋ | 7/26 [00:10<00:31, 1.65s/it]Training Epoch: 31%|███ | 8/26 [00:12<00:29, 1.66s/it]Training Epoch: 35%|███▍ | 9/26 [00:14<00:28, 1.67s/it]Training Epoch: 38%|███▊ | 10/26 [00:15<00:26, 1.68s/it]Training Epoch: 42%|████▏ | 11/26 [00:17<00:25, 1.68s/it]Training Epoch: 46%|████▌ | 12/26 [00:19<00:23, 1.68s/it]Training Epoch: 50%|█████ | 13/26 [00:21<00:21, 1.69s/it]Training Epoch: 54%|█████▍ | 14/26 [00:22<00:20, 1.69s/it]Training Epoch: 58%|█████▊ | 15/26 [00:24<00:18, 1.69s/it]Training Epoch: 62%|██████▏ | 16/26 [00:26<00:16, 1.69s/it]Training Epoch: 65%|██████▌ | 17/26 [00:27<00:15, 1.68s/it]Training Epoch: 69%|██████▉ | 18/26 [00:29<00:13, 1.68s/it]Training Epoch: 73%|███████▎ | 19/26 [00:31<00:11, 1.68s/it]Training Epoch: 77%|███████▋ | 20/26 [00:32<00:10, 1.68s/it]Training Epoch: 81%|████████ | 21/26 [00:34<00:08, 1.68s/it]Training Epoch: 85%|████████▍ | 22/26 [00:36<00:06, 1.68s/it]Training Epoch: 88%|████████▊ | 23/26 [00:37<00:05, 1.68s/it]Training Epoch: 92%|█████████▏| 24/26 [00:39<00:03, 1.68s/it]Training Epoch: 96%|█████████▌| 25/26 [00:41<00:01, 1.68s/it]Training Epoch: 100%|██████████| 26/26 [00:42<00:00, 1.64s/it]

Train epoch took 42.5895 seconds

Validating Epoch: 0%| | 0/7 [00:00<?, ?it/s]

Validating Epoch: 14%|█▍ | 1/7 [00:01<00:06, 1.15s/it]Validation Step 1 took 1.0252 seconds

Validating Epoch: 29%|██▊ | 2/7 [00:01<00:04, 1.11it/s]Validation Step 2 took 0.6191 seconds

Validating Epoch: 43%|████▎ | 3/7 [00:02<00:03, 1.22it/s]Validation Step 3 took 0.6206 seconds

Validating Epoch: 57%|█████▋ | 4/7 [00:03<00:02, 1.28it/s]Validation Step 4 took 0.6143 seconds

Validating Epoch: 71%|███████▏ | 5/7 [00:04<00:01, 1.31it/s]Validation Step 5 took 0.6110 seconds

Validating Epoch: 86%|████████▌ | 6/7 [00:04<00:00, 1.33it/s]Validation Step 6 took 0.6172 seconds

Validating Epoch: 100%|██████████| 7/7 [00:05<00:00, 1.38it/s]

83%|████████▎ | 5/6 [04:00<00:47, 47.89s/it]Validation Step 7 took 0.2390 seconds

Validation epoch took 5.0783 seconds

Validation IoU: 0.8254, DSC (F1): 0.9039, Pixel Accuracy: 0.8387

Epoch 5 total time: 47.6691 seconds

------------------------------

Train Loss EPOCH 5: 0.2754

Valid Loss EPOCH 5: 0.4959

Validation Metrics - IoU: 0.8254, DSC (F1): 0.9039, Pixel Accuracy: 0.8387

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Training Epoch: 0%| | 0/26 [00:00<?, ?it/s]

Training Epoch: 4%|▍ | 1/26 [00:00<00:18, 1.36it/s]Training Epoch: 8%|▊ | 2/26 [00:02<00:31, 1.31s/it]Training Epoch: 12%|█▏ | 3/26 [00:04<00:33, 1.48s/it]Training Epoch: 15%|█▌ | 4/26 [00:05<00:34, 1.56s/it]Training Epoch: 19%|█▉ | 5/26 [00:07<00:33, 1.60s/it]Training Epoch: 23%|██▎ | 6/26 [00:09<00:32, 1.63s/it]Training Epoch: 27%|██▋ | 7/26 [00:10<00:31, 1.65s/it]Training Epoch: 31%|███ | 8/26 [00:12<00:29, 1.66s/it]Training Epoch: 35%|███▍ | 9/26 [00:14<00:28, 1.66s/it]Training Epoch: 38%|███▊ | 10/26 [00:15<00:26, 1.67s/it]Training Epoch: 42%|████▏ | 11/26 [00:17<00:25, 1.67s/it]Training Epoch: 46%|████▌ | 12/26 [00:19<00:23, 1.67s/it]Training Epoch: 50%|█████ | 13/26 [00:20<00:21, 1.68s/it]Training Epoch: 54%|█████▍ | 14/26 [00:22<00:20, 1.68s/it]Training Epoch: 58%|█████▊ | 15/26 [00:24<00:18, 1.68s/it]Training Epoch: 62%|██████▏ | 16/26 [00:25<00:16, 1.68s/it]Training Epoch: 65%|██████▌ | 17/26 [00:27<00:15, 1.68s/it]Training Epoch: 69%|██████▉ | 18/26 [00:29<00:13, 1.68s/it]Training Epoch: 73%|███████▎ | 19/26 [00:31<00:11, 1.68s/it]Training Epoch: 77%|███████▋ | 20/26 [00:32<00:10, 1.68s/it]Training Epoch: 81%|████████ | 21/26 [00:34<00:08, 1.68s/it]Training Epoch: 85%|████████▍ | 22/26 [00:36<00:06, 1.68s/it]Training Epoch: 88%|████████▊ | 23/26 [00:37<00:05, 1.68s/it]Training Epoch: 92%|█████████▏| 24/26 [00:39<00:03, 1.68s/it]Training Epoch: 96%|█████████▌| 25/26 [00:41<00:01, 1.68s/it]Training Epoch: 100%|██████████| 26/26 [00:42<00:00, 1.63s/it]

Train epoch took 42.4769 seconds

Validating Epoch: 0%| | 0/7 [00:00<?, ?it/s]

Validating Epoch: 14%|█▍ | 1/7 [00:01<00:06, 1.15s/it]Validation Step 1 took 1.0020 seconds

Validating Epoch: 29%|██▊ | 2/7 [00:01<00:04, 1.10it/s]Validation Step 2 took 0.6111 seconds

Validating Epoch: 43%|████▎ | 3/7 [00:02<00:03, 1.20it/s]Validation Step 3 took 0.6158 seconds

Validating Epoch: 57%|█████▋ | 4/7 [00:03<00:02, 1.25it/s]Validation Step 4 took 0.6152 seconds

Validating Epoch: 71%|███████▏ | 5/7 [00:04<00:01, 1.30it/s]Validation Step 5 took 0.6116 seconds

Validating Epoch: 86%|████████▌ | 6/7 [00:04<00:00, 1.33it/s]Validation Step 6 took 0.6121 seconds

Validating Epoch: 100%|██████████| 7/7 [00:05<00:00, 1.37it/s]

100%|██████████| 6/6 [04:48<00:00, 48.05s/it]Validation Step 7 took 0.2441 seconds

Validation epoch took 5.1122 seconds

Validation IoU: 0.8879, DSC (F1): 0.9402, Pixel Accuracy: 0.9088

Epoch 6 total time: 47.5903 seconds

------------------------------

Train Loss EPOCH 6: 0.2999

Valid Loss EPOCH 6: 0.2137

Validation Metrics - IoU: 0.8879, DSC (F1): 0.9402, Pixel Accuracy: 0.9088

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Model saved to /content/drive/My Drive/BITSAuto/Assignment\_3/models/unet.pth