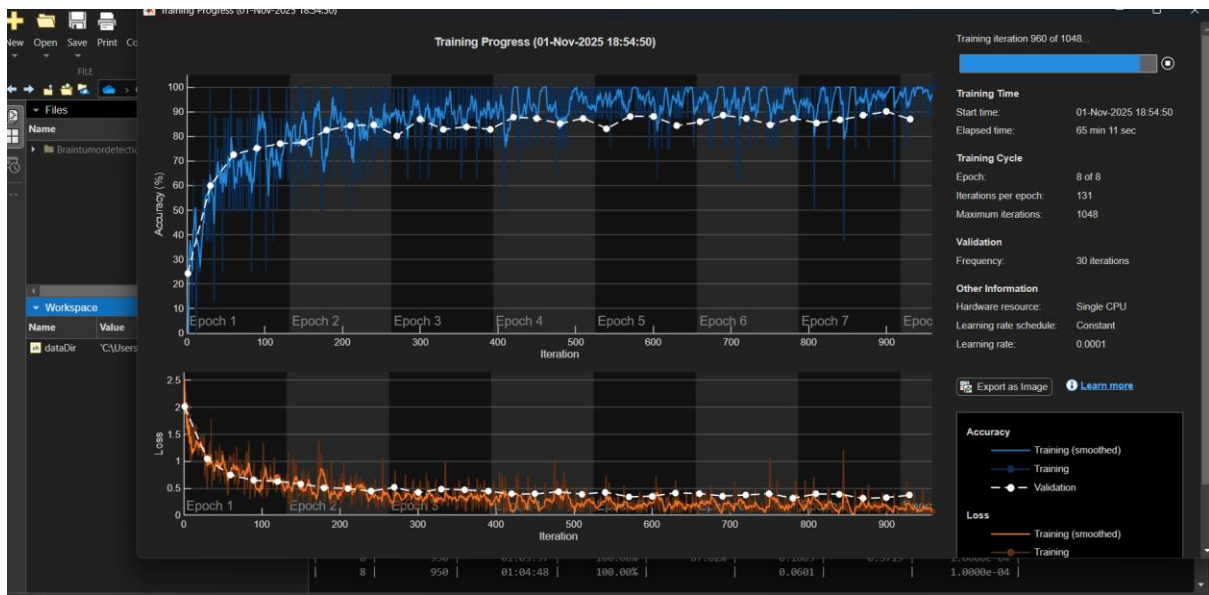


Brain Tumor Detection Using Deep Learning (ResNet-18 on MRI Images)

Result:





Command Window

New to MATLAB? See resources for [Getting Started](#).

Label counts:

| Label | Count |
|------------|-------|
| glioma | 300 |
| meningioma | 306 |
| notumor | 405 |
| pituitary | 300 |

Training on single CPU.
Initializing input data normalization.

| Epoch | Iteration | Time Elapsed (hh:mm:ss) | Mini-batch Accuracy | Validation Accuracy | Mini-batch Loss | Validation Loss | Base Learning Rate |
|-------|-----------|-------------------------|---------------------|---------------------|-----------------|-----------------|--------------------|
| 1 | 1 | 00:01:03 | 12.50% | 24.43% | 2.5290 | 2.0135 | 1.0000e-04 |
| 1 | 30 | 00:03:53 | 100.00% | 59.92% | 0.4824 | 1.0403 | 1.0000e-04 |
| 1 | 50 | 00:04:58 | 62.50% | | 1.1889 | | 1.0000e-04 |
| 1 | 60 | 00:05:54 | 50.00% | 72.52% | 1.0041 | 0.7475 | 1.0000e-04 |
| 1 | 90 | 00:07:42 | 62.50% | 75.19% | 0.9521 | 0.6459 | 1.0000e-04 |
| 1 | 100 | 00:08:07 | 87.50% | | 0.3348 | | 1.0000e-04 |
| 1 | 120 | 00:09:32 | 75.00% | 77.10% | 0.6492 | 0.6302 | 1.0000e-04 |
| 2 | 150 | 00:11:56 | 87.50% | 77.48% | 0.4240 | 0.5834 | 1.0000e-04 |
| 2 | 180 | 00:14:58 | 62.50% | 82.44% | 0.8539 | 0.5127 | 1.0000e-04 |
| 2 | 200 | 00:16:25 | 87.50% | | 0.3885 | | 1.0000e-04 |
| 2 | 210 | 00:17:54 | 75.00% | 84.35% | 0.3993 | 0.4985 | 1.0000e-04 |
| 2 | 240 | 00:20:43 | 62.50% | 84.73% | 0.5485 | 0.4488 | 1.0000e-04 |
| 2 | 250 | 00:21:18 | 75.00% | | 0.4353 | | 1.0000e-04 |
| 3 | 270 | 00:22:46 | 87.50% | 80.15% | 0.3502 | 0.5148 | 1.0000e-04 |
| 3 | 300 | 00:24:36 | 62.50% | 87.02% | 0.5251 | 0.4242 | 1.0000e-04 |
| 3 | 330 | 00:26:22 | 87.50% | 82.82% | 0.3567 | 0.4871 | 1.0000e-04 |

