

## Resultados con valores predeterminados

Learning Rate: 1e-2

Max Epochs: 30

## Resultados con cambio en valores de learning rate y max epochs

Learning Rate: 1e-6

Max Epochs: 50

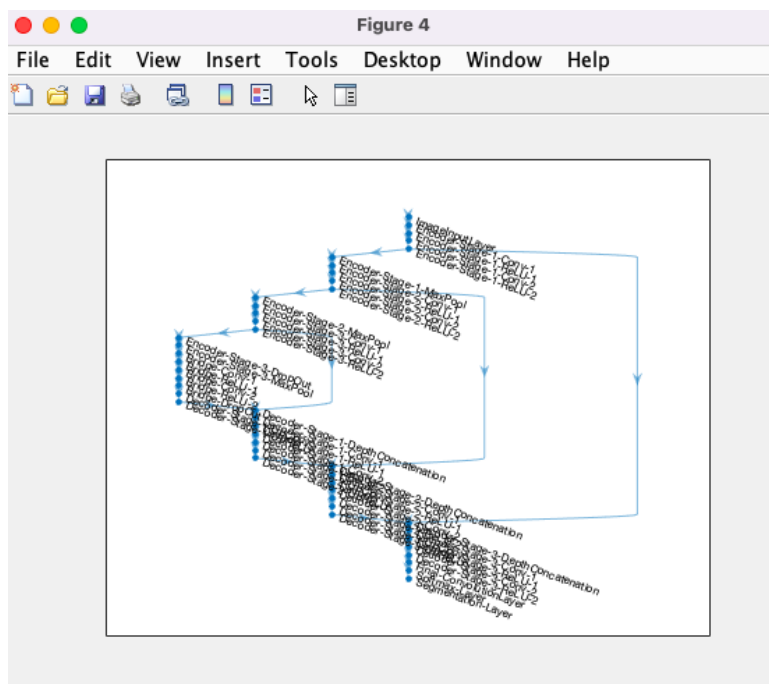
Command Window

Initializing input data normalization.

Epoch	Iteration	Time Elapsed (hh:mm:ss)	Mini-batch Accuracy	Mini-batch Loss	Base Learning Rate
1	1	00:00:17	78.79%	1.5972	0.0010
10	10	00:02:28	97.17%	0.3250	0.0010
20	20	00:04:23	97.91%	0.1597	0.0010
30	30	00:06:15	98.43%	0.0866	0.0010
40	40	00:08:30	98.54%	0.0577	0.0010
50	50	00:10:21	98.66%	0.0449	0.0010

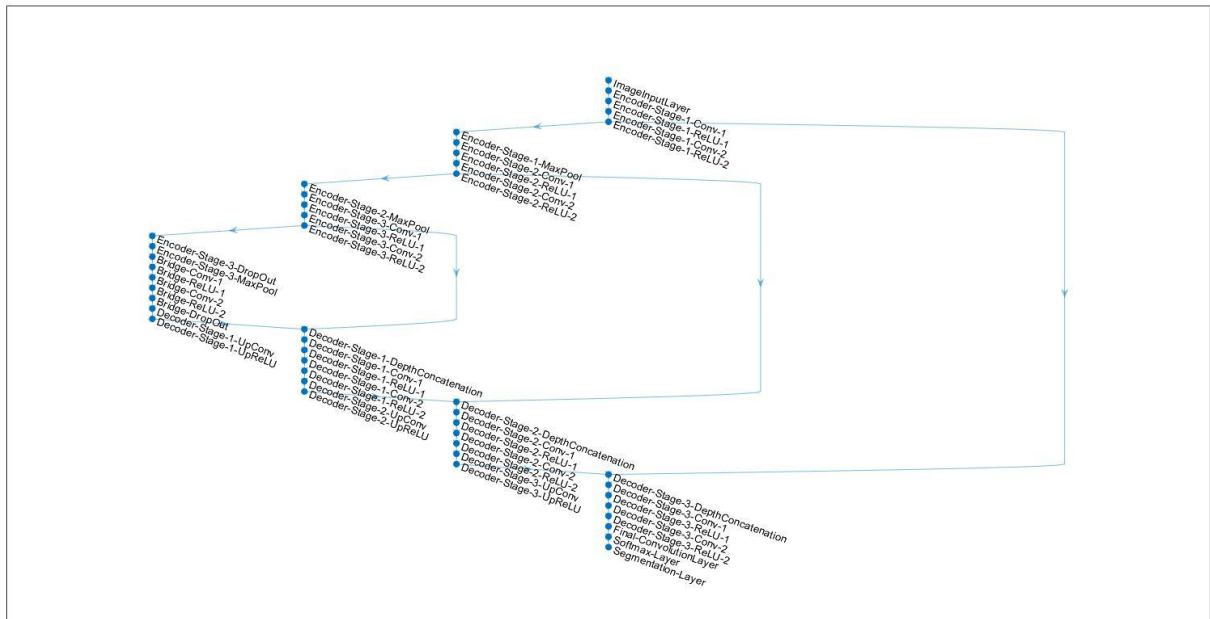
Training finished: Max epochs completed.

Zoom: 100% UTF-8 CRLF script



Learning Rate: 1e-6

Max Epochs: 40



Training on single CPU.

Initializing input data normalization.

=====						
Epoch	Iteration	Time Elapsed	Mini-batch	Mini-batch	Base Learning	
		(hh:mm:ss)	Accuracy	Loss	Rate	
=====						
1	1	00:00:06	92.21%	1.0396	1.0000e-06	
10	10	00:01:11	91.64%	1.0978	1.0000e-06	
20	20	00:02:21	90.33%	1.2291	1.0000e-06	
30	30	00:03:33	88.97%	1.3663	1.0000e-06	
40	40	00:04:43	88.21%	1.4414	1.0000e-06	
=====						

Training finished: Max epochs completed.

net =

[DAGNetwork](#) with properties:

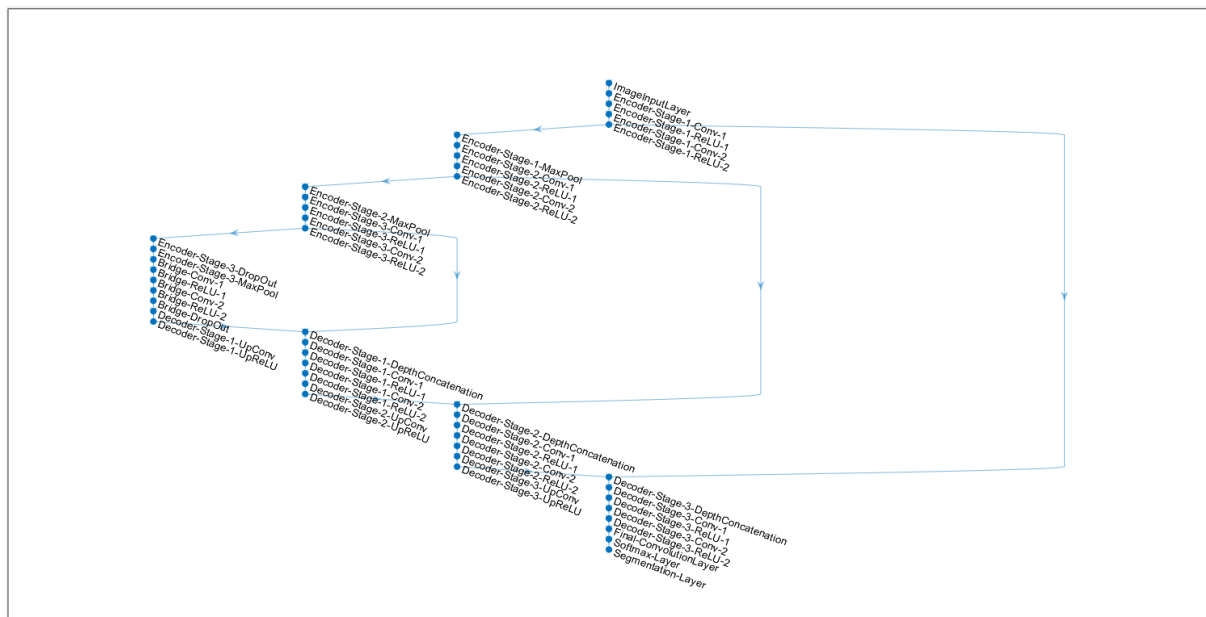
```

Layers: [58x1 nnet.cnn.layer.Layer]
Connections: [61x2 table]
InputNames: {'ImageInputLayer'}
OutputNames: {'Segmentation-Layer'}

```

Learning Rate: 1e-5

Max Epochs: 40



Training on single CPU.

Initializing input data normalization.

Epoch	Iteration	Time Elapsed (hh:mm:ss)	Mini-batch Accuracy	Mini-batch Loss	Base Learning Rate
1	1	00:00:06	49.15%	4.0143	1.0000e-05
10	10	00:01:05	87.66%	1.3300	1.0000e-05
20	20	00:02:18	92.25%	0.9598	1.0000e-05
30	30	00:03:39	92.05%	0.9456	1.0000e-05
40	40	00:05:02	93.75%	0.7792	1.0000e-05

Training finished: Max epochs completed.

net =

[DAGNetwork](#) with properties:

```

Layers: [58x1 nnet.cnn.layer.Layer]
Connections: [61x2 table]
InputNames: {'ImageInputLayer'}
OutputNames: {'Segmentation-Layer'}

```

- Número más apropiado de epochs máximo  
Consideramos que el número más apropiado de epochs máximo es 50, ya que al hacer las simulaciones se tenía una mayor precisión.
- ¿Cómo afecta el learning rate la precisión?  
Al tener un menor learning rate la precisión bajaba comparado cuando la precisión era mayor.