CNN Feature Analysis: Grid 3×3

Original Input

One-Hot Embedding
10 channels
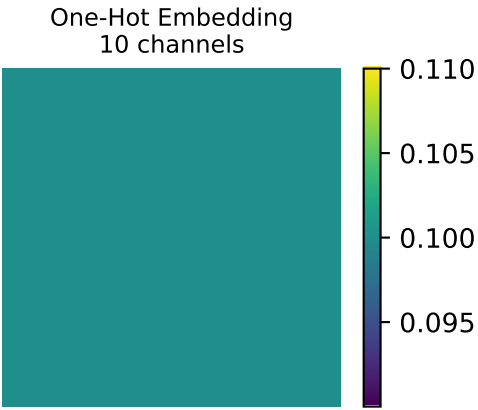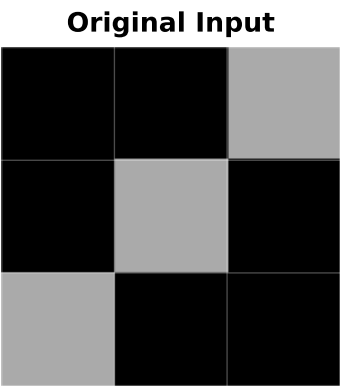
Grid Size: 3×3 | CNN: 3 conv layers | Hidden Dim: 128

Layer Statistics:
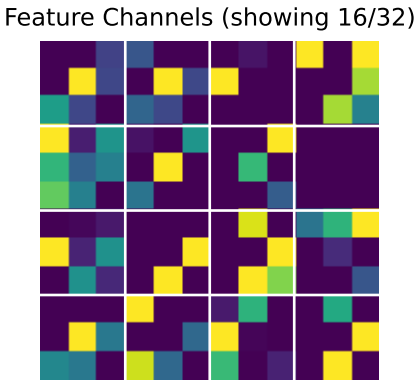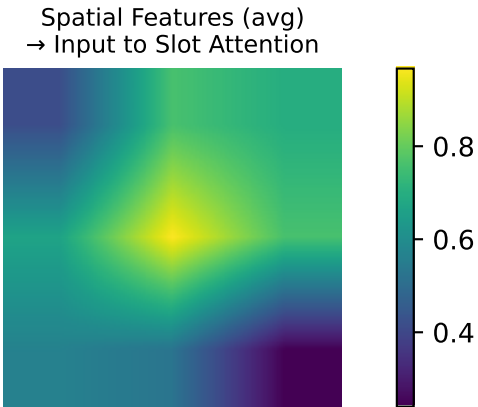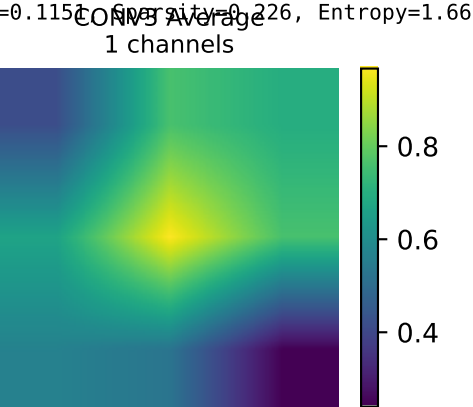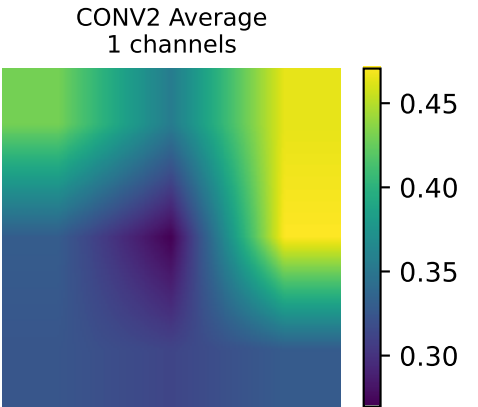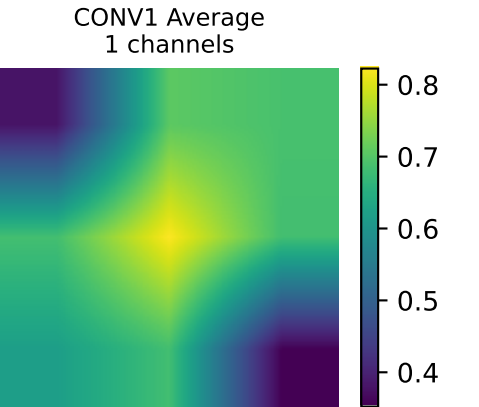--

EMBED: Ch=10, Size=(3, 3), Mean=0.100±0.213, Range=[0.00,1.00]
  Diversity=0.4444, Sparsity=0.900, Entropy=0.29

CONV1: Ch=32, Size=(3, 3), Mean=0.622±0.445, Range=[0.00,5.41]
  Diversity=0.5796, Sparsity=0.542, Entropy=1.13

CONV2: Ch=32, Size=(3, 3), Mean=0.364±0.313, Range=[0.00,4.03]
  Diversity=0.6148, Sparsity=0.601, Entropy=0.95

CONV3: Ch=32, Size=(3, 3), Mean=0.619±0.460, Range=[0.00,3.46]
  Diversity=0.1151, Sparsity=0.226, Entropy=1.66

SPATIAL_FEATURES: Ch=32, Size=(3, 3), Mean=0.619±0.460, Range=[0.00,3.46]
  Diversity=0.1151, Sparsity=0.226, Entropy=1.66

CONV1 Average
1 channels

CONV2 Average
1 channels

CONV3 Average
1 channels

Spatial Features (avg)
→ Input to Slot Attention

Feature Channels (showing 16/32)

Feature Channels (showing 16/32)

Feature Channels (showing 16/32)

Feature Channels (showing 16/32)
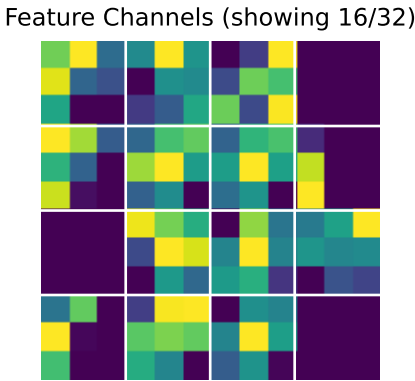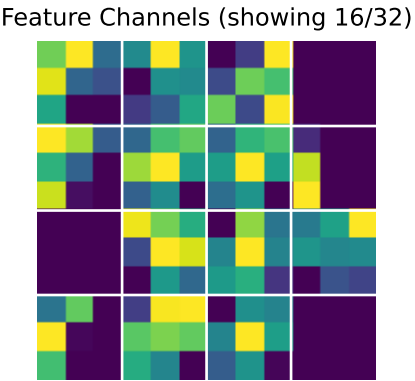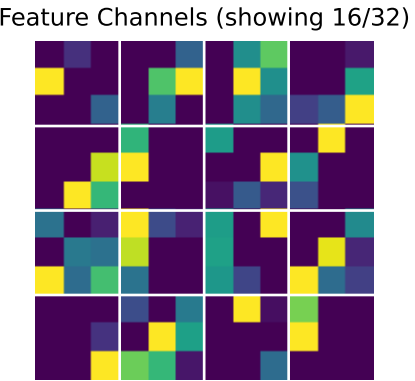

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DIAGNOSIS SUMMARY:
=================================================
  GOOD SPARSITY
⚠   LOW ENTROPY: Low information
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Spatial Feature Channel Activations (mean ± std)

Spatial Location Similarity
(sample of 9 locations)