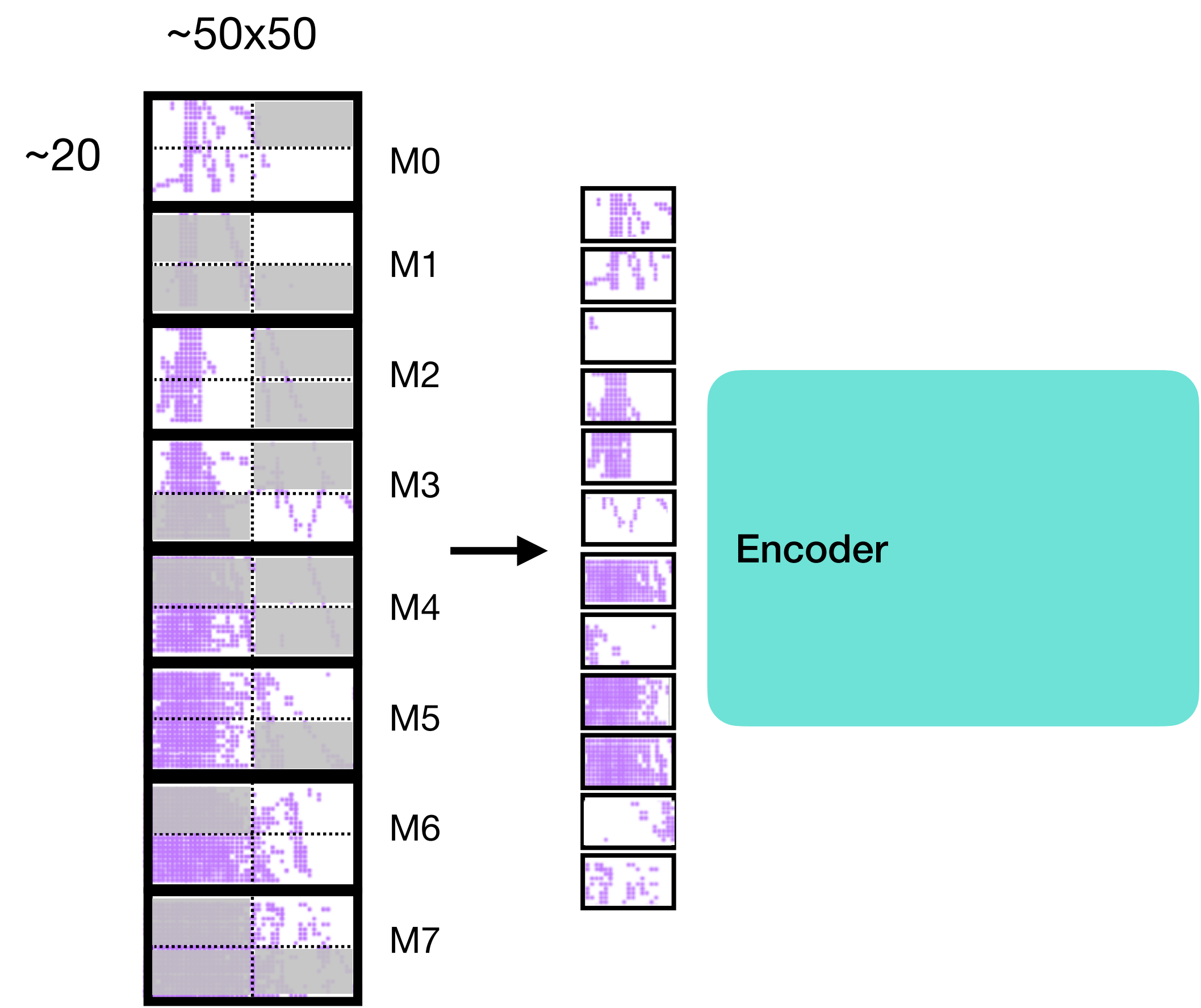


# Backup

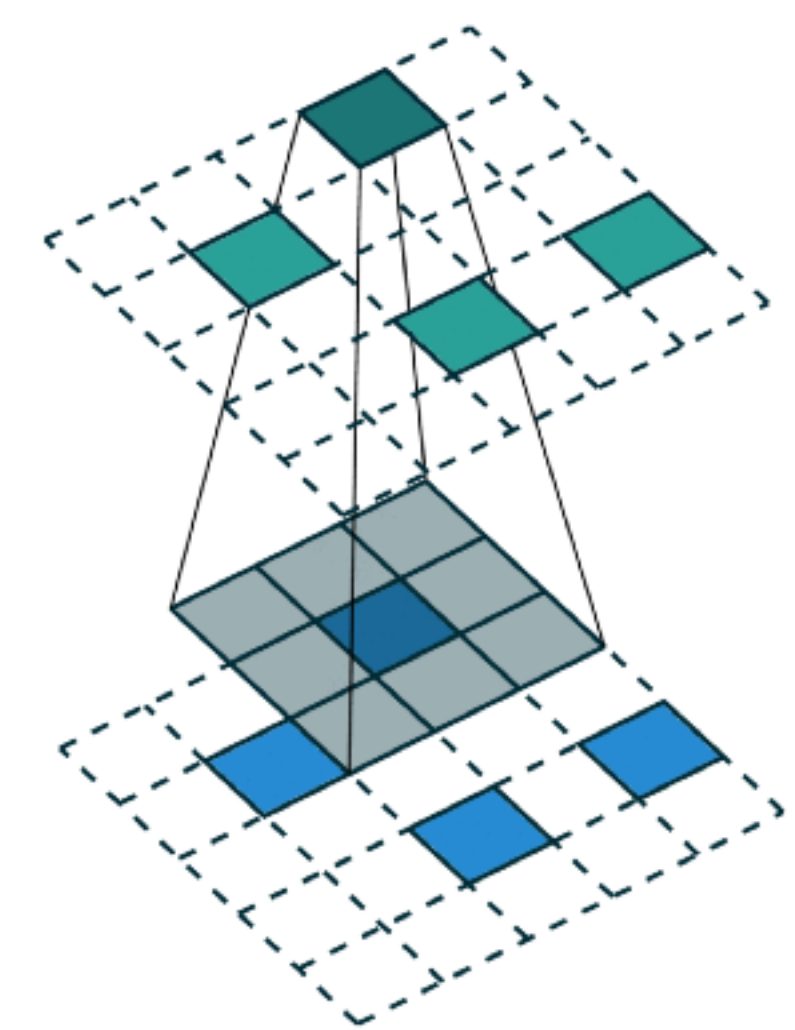
---

# Pre-Training

## Sparse Submanifold Neural Network



**SCNN:** Creates a vector embedding for every patch in the input



SCNN reduces the spatial coordinates while increasing the feature dimensions.

It performs convolution only on active voxels, effectively ignoring the vast empty regions typical in detector data.

