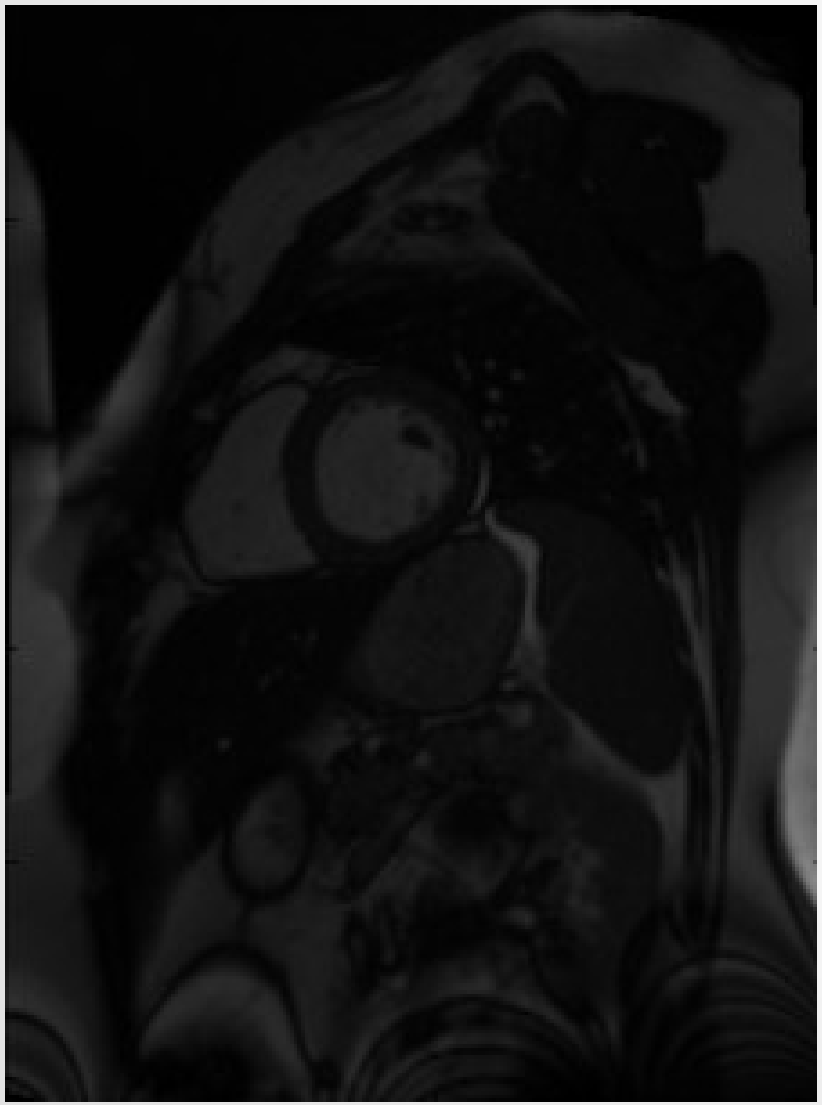
MRI Cardiac Segmentation for the Left Ventricle



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Week 3

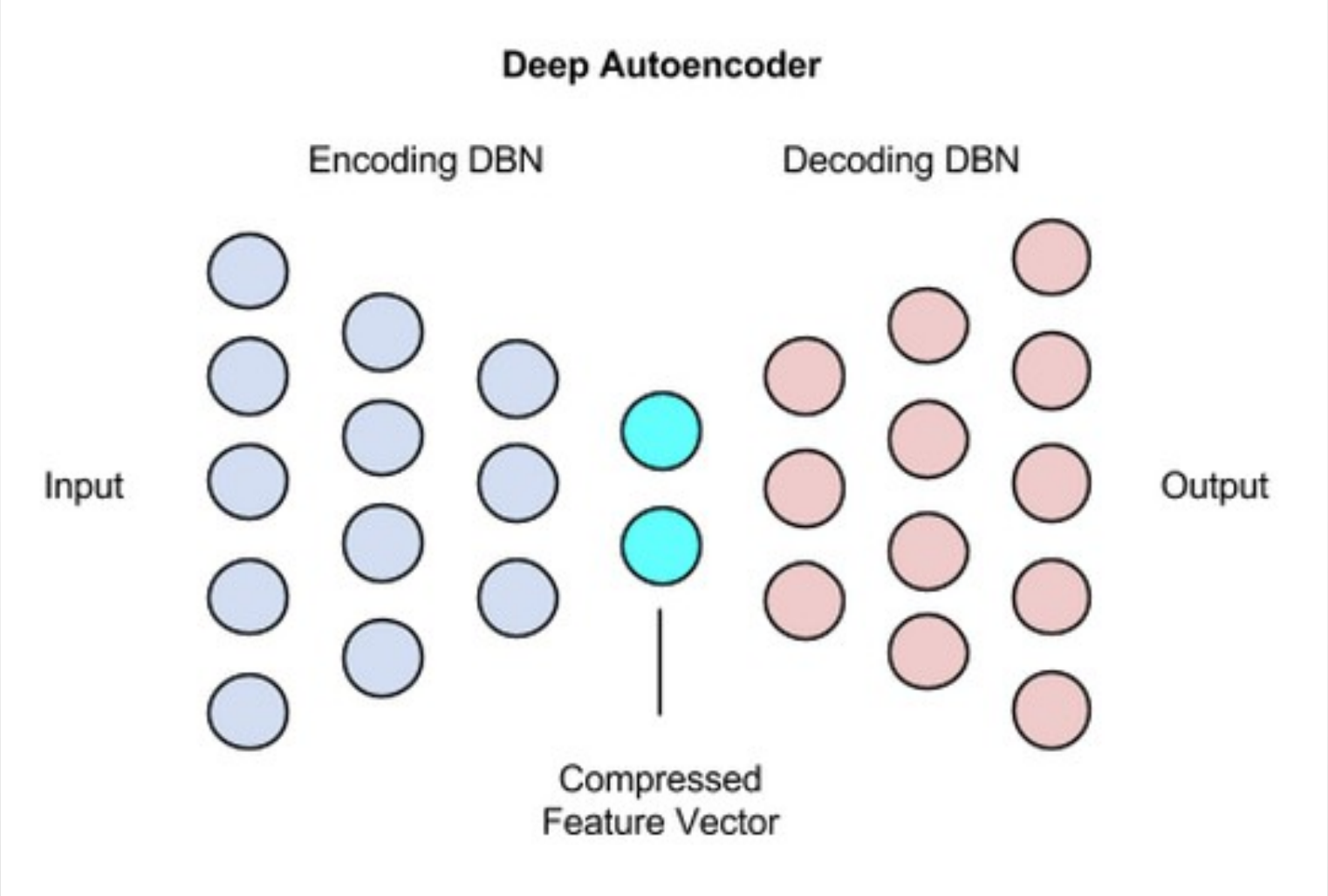
Progress

- Researched more about feature extraction using Stacked Autoencoders
- Extracted more patches from 10 patients to be used as training the Autoencoder
- Created an Autoencoder model using Keras over Tensorflow
- Wrote program to visualize weights and the output of the Autoencoder

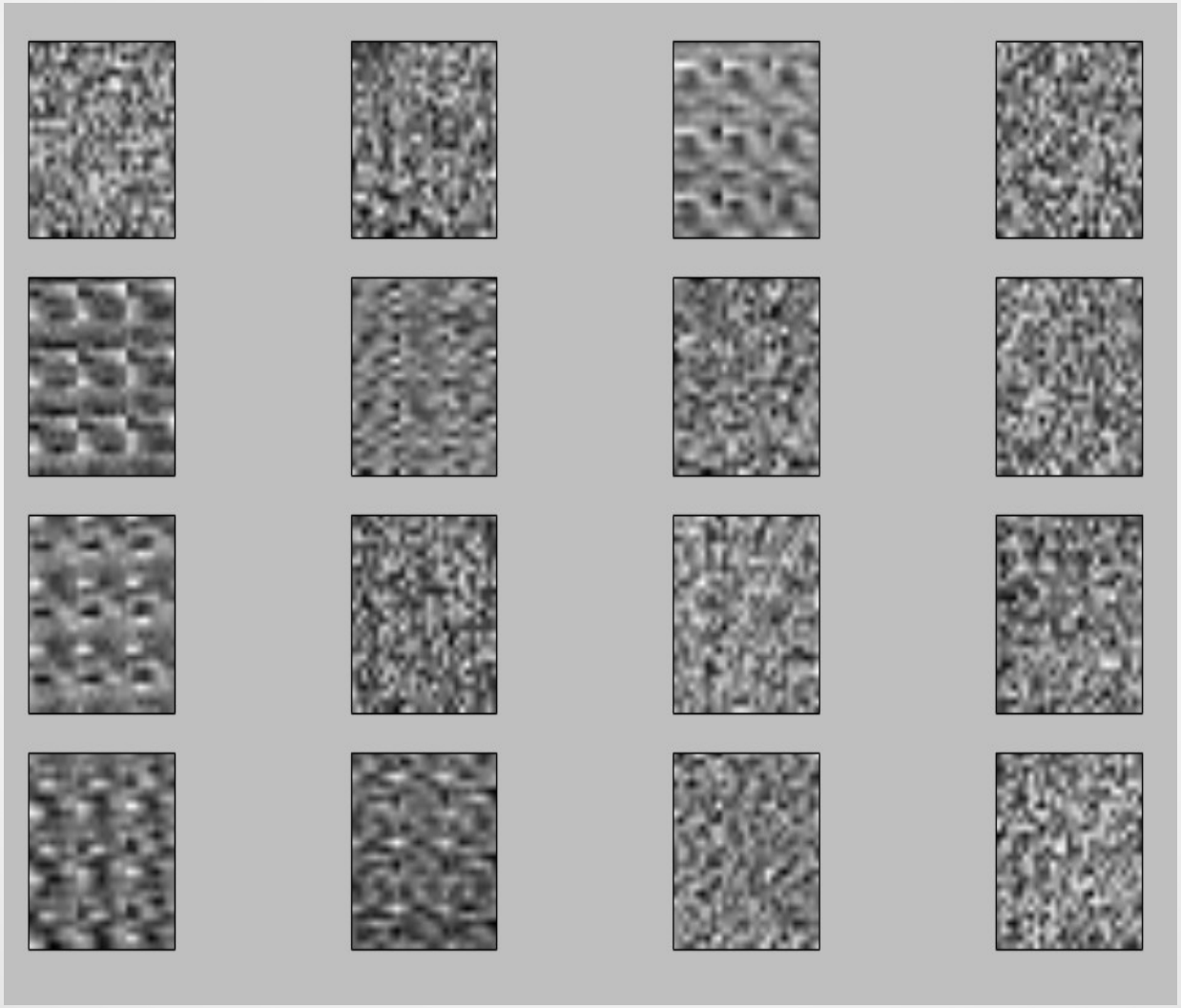
Autoencoder model

- Input to the Autoencoder are patches that are 9x9x3x3 in size or 729 as a vector
- Autoencoder has layers of size 729, 144, 64, 36, 64, 144, 729
  - Hidden layers will be used to extract features
  - 20 patients each with about 50 patches will be used to train Autoencoder

Autoencoder model



Visualized weights for Autoencoder



Plan for next week

- Extract more patches from patients
- Continue to train Autoencoder and play around with parameters to try to get better results
- Extract labeled features from Autoencoder and use them to train Mondrian Forest

References

- http://deeplearning4j.org/img/deep_autoencoder.png