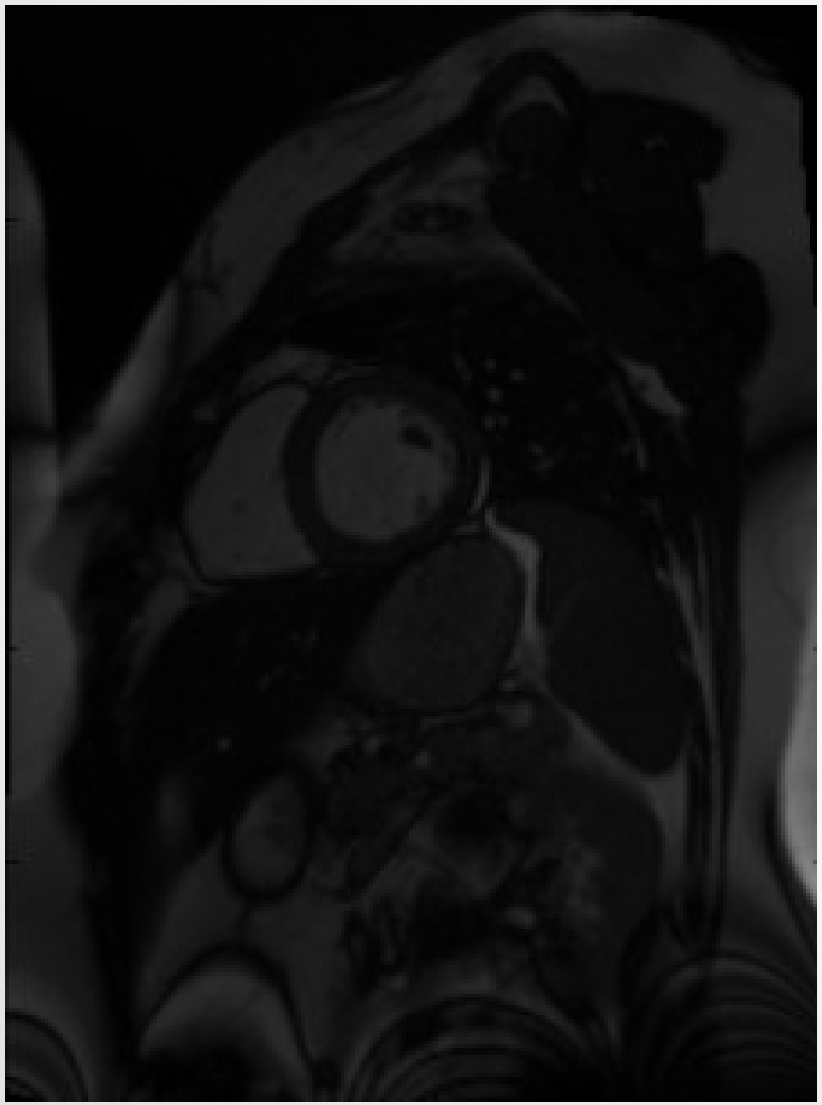
MRI Cardiac Segmentation for the Left Ventricle

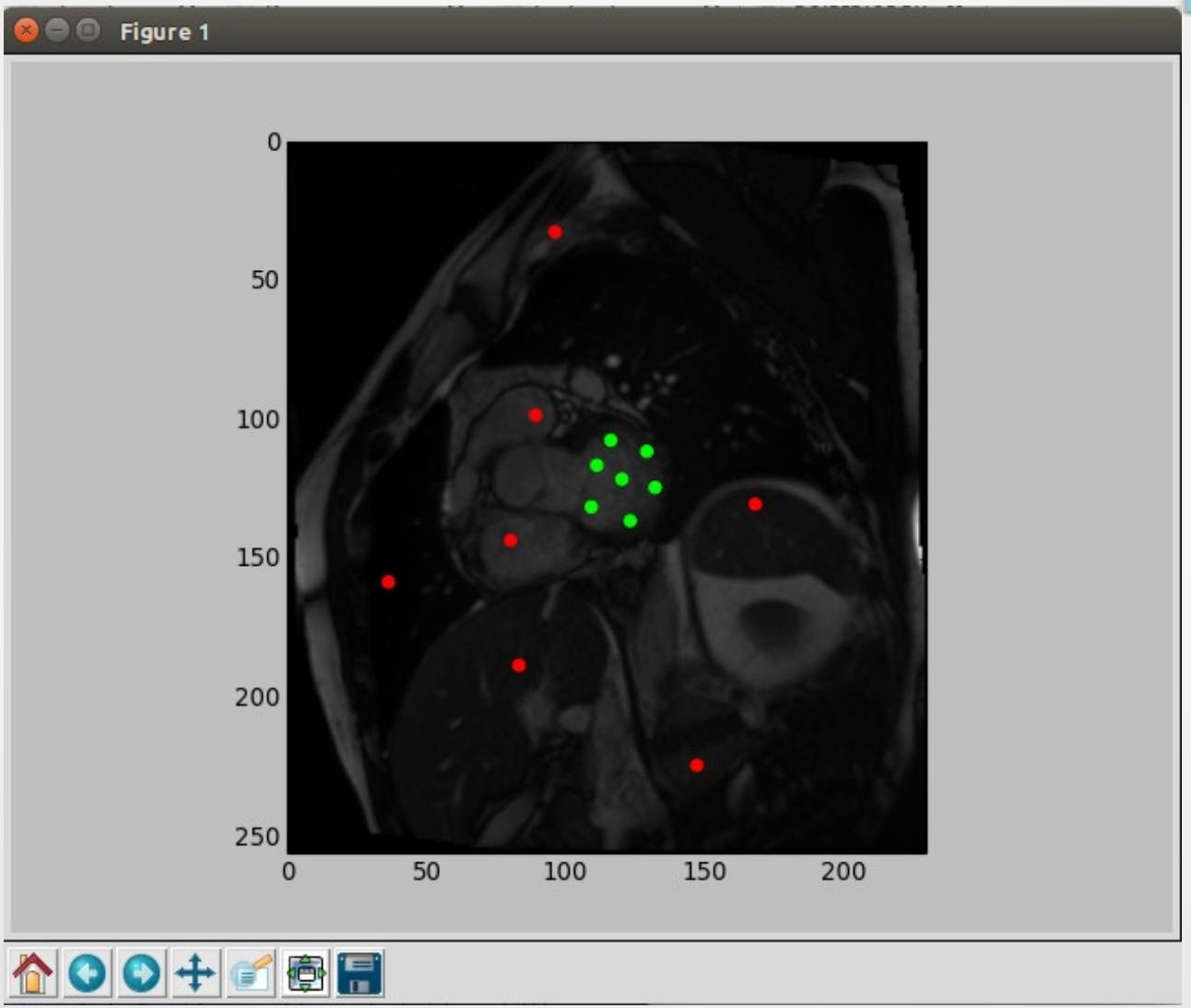


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Week 2

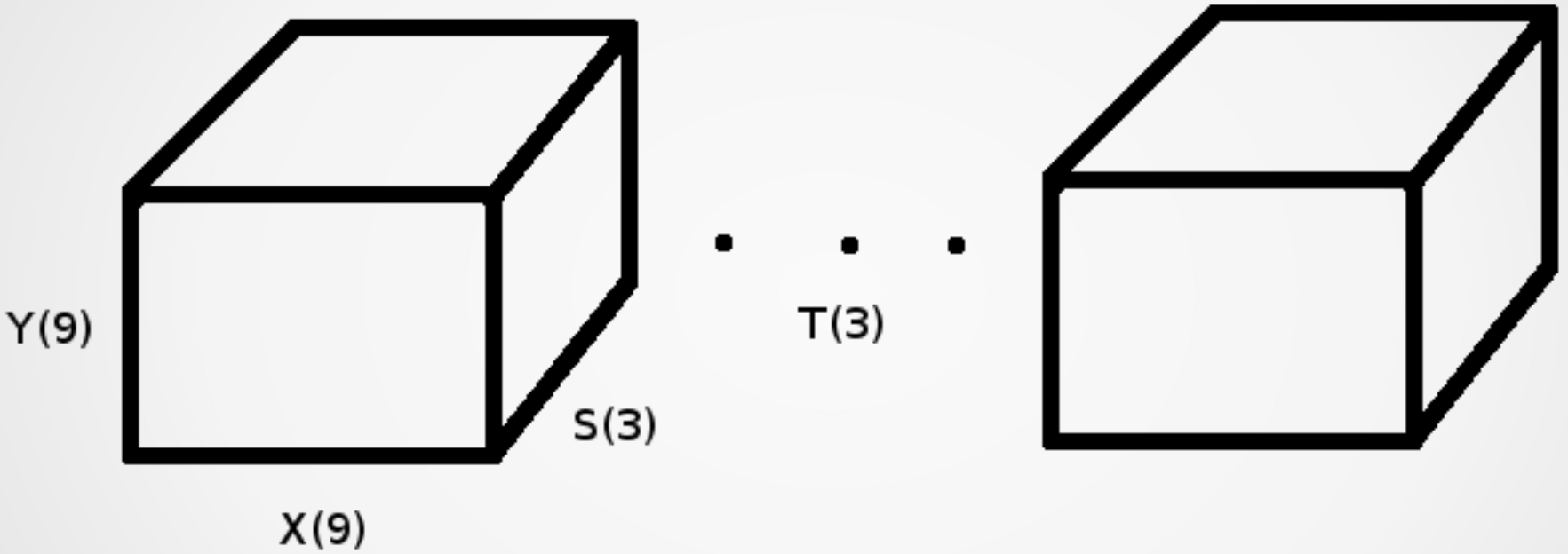
Progress

- Installed Kaggle Dataset
  - Downloaded the 4D MRI Dataset from Kaggle's competition page
- Created a program to manually extract patches from 4D data
  - Matplotlib used to select negative and positive examples of LV areas
- Selected points from 4D images of 20 patients and extracted 4D patches around these points
- Researched feature extraction using Autoencoders

Matplotlib – Patch selection



Patch Extraction Model



- Extracted patches will be centered around the selected points
- 9x9x3x3 patches will be saved as a vector of size 729 as input to the autoencoder

Plan for next week

- Research more about feature extraction using Stacked Autoencoders
- Look for Autoencoder models considering different machine learning frameworks and libraries
  - Caffe
  - Tensorflow
  - Keras
- Begin training Autoencoder