**1. Forward Application**

**Experiment-1 with DNNs only**

Run aorta\_NNFEA\_surrogate\_shape\_x\_c\_new1.py to train W-Net, U-Net, MLP, and TransNet

Run aorta\_NNFEA\_surrogate\_shape\_x\_c\_meshgraphnet.py to train meshgraphnet

Run analyze\_surrogate\_shape\_x\_c\_use\_meanshape\_new1.py to get the tables.

**Experiment-2 with DNNs only**

Run aorta\_NNFEA\_surrogate\_shape\_x\_c\_m.py to train W-Net

Run analyze\_surrogate\_shape\_x\_c\_m\_use\_meanshape.py to get the tables.

**DNN-FEM integration**

Run refine\_surrogate\_shape\_x\_c.py for experiment-1

Run refine\_surrogate\_shape\_x\_c\_m.py for experiment-2

**2. Inverse Application**

Run aorta\_FEA\_C3D8\_SRI\_inverse\_mat\_ex\_vivo\_NN.py to do inverse analysis.

Run analyze\_inverse\_mat\_ex\_vivo\_NN\_use\_meanshape.py to get the tables.

Please download the data folder and the result folder from google drive

I will post the google drive links on Github