

# Homework 3

ECE285

Due: 11:59pm PT on Feb 21

In this homework, we learn how to use VAE to generate medical images.  
Take the chest X-ray dataset here

<https://www.kaggle.com/paultimothymooney/chest-xray-pneumonia>

Take the code of VAE here

<https://github.com/AntixK/PyTorch-VAE>

Then train a VAE model on the chest X-ray dataset, use the trained VAE to generate chest X-ray images, and write a short report (1-2 pages, NeurIPS format).

In the report, you can include the following: 1) hyperparameter settings; 2) training loss curves; 3) Inception score and FID score of generated images, using code here

<https://pytorch-ignite.ai/blog/gan-evaluation-with-fid-and-is/>

4) examples of generated images.

Submit the report to Gradescope. No need to submit code.