Software Design Project 4 Proposal

For the final project, I want to classify images of dog tumors into their specific subtypes using similar architectures to the ones we used in Project 3! The main goal would be to work towards the best model and compare my architecture accuracy results to the resources I use.

For this, I will be using a public dataset provided by Nature Scientific Data, https://www.nature.com/articles/s41597-022-01692-w#Sec5. I may also use some data from this website to test my model https://caninecommons.cancer.gov/#/explore. I am not completely sure if I can use data from the ICDC…..but Ill read more into it.

I would work off of a CNN model probably Lenet-5 and maybe even the alternate Lenet-5 model from project 3, https://arxiv.org/pdf/1807.01688.pdf . As well as some inference servers with endpoints.

My primary deliverables will be a comparison between my CNN model to classify the images into subtypes. I also would like to see what the results for human tumors would be!!

If all goes smoothly with my model and results I would like to add an inference server that has endpoints that can classify user input, and provide model information, and the comparison data.