General Problem Statement

In plain English, what are we trying to achieve?

Technical Problem Statement

What is the technical approach to achieving above? Regression, classification, generative, LLM?

Data

What is the sample population?

Type of data - image, chart, time series, multimodal

Augmentations?

Loss

Classically, should match problem type:

- Regression: MSE, Classification: Log loss/Multiclass log loss

What is loss function rewarding? Consider regularization.

Network

Classic neural net or with variations?

autoencoder, GAN, RNN, LSTM, CNN, combo of these. If not sure, what's it closest to?

If brand new, what kind of data can it take in and process well?

Training

What hyperparameters were considered? Should have to do with the network structure

Use of pretrained model weights?

Train/test split—random, cross validation

Results

Sensitivity/specificity, PPV/NPV, AU-ROC? Imaging: DICE, Hausdorff Distance

Other measures of success?

Clinical relevance?

Risk of bias?