AML Question Bank

* Basic Machine Learning – Types, challenges, applications,
* Supervised, unsupervised
* Linear Regression, Logistic Regression, formulae, example solve.
* Explain following, significance, diagram, formulae
  + NN - all layers, formulae, explanation
  + RNN – all layers, formulae, explanation
  + CNN – diagram
  + LSTM Operations and Gates – formulae, diagram
* Activation Functions and loss functions – Explain and formula
* Attention Mechanism in RNNs – diagram, compare with CNN
* Fairness in Cybersecurity- advantages, disadvantages, challenges
* Explainable AI in Cybersecurity
* Ethical Issues in Cybersecurity ML
* Transparency in Cybersecurity Models
* Externalities in Cybersecurity ML
* Privacy
* Implementation of Transparency in Cybersecurity ML
* Explain the applications in details
  + Anomaly Detection in Traffic
  + Spam Filtering in Security
  + Phishing Email Detection Model
* Derivations
  + Given a activation function (sigmoid, tanh), Derive the expression
  + Given a activation cross entropy, Derive the expression
* Given a input, weight, bias, target
  + Calculate any cost functions (Sigmoid, Relu ….)
  + Compute loss functions (MSE)