In phase 4, our primary objective is to implement Neural Network architecture for the HCDR project. Phase 4 initial phase focuses on designing different neural network architectures and checking for the presenece of any data leakage. The dataset considered for this phase is the one we merged from different datasets available and by fine tuning it by dropping trivial attributes. We intend to build 3 different neural networks by adding or removing hidden layers and the weights associated with it. Further we plan to analyse our accuracy of our model by adjusting epoch, batch size and activation function.

In the entire project, we have used kaggle datasets to perform exploratory data analysis, create machine learning pipelines, and evaluate models according to a variety of criteria before deploying a model. As part of this study, we used a variety of traditional machine learning methods, including Logistic Regression, Random Forest Classifier, XGBoost, to determine with accuracy if a person qualifies for a mortgage. A deep learning model was also set up. We developed a machine learning model for binary classification using Pytorch. A model was created, trained, and evaluated as well.