**Context**

The importance of diagnosis of pigmented skin lesions using Machine learning and image processing techniques is growing in the field of medicine by helping in early detection of skin conditions like skin cancer

**Objective**

The project aim is to develop a machine learning model using Deep learning technique like CNN for the diagnosis of pigmented skin lesions. The aim of the project is to develop and train a model with a large dataset and using these models with test data to evaluate their performance to develop a final model.

**Method**

The project is developed using the CRISP DM approach by following a structured guideline which includes multiple processes

**Results**

The results from the process using the Convolution neural network technique seem to perform best in the training, testing and the validation data sets, getting decent accuracies and confusion matrices. Amongst the 3 different activation functions used.i.e. Softmax, Relu, tanh, Relu activation function had the best performance followed by softmax and tanh activation functions. The performance of softmax and tanh were not that close to the performance of Relu functions.

**Novelty**

The results using Deep learning techniques like convolution neural networks is more accurate compared to other machine learning techniques like SVM, random forest used predominantly. Moreover, using CNN, the model understands the data in a much deeper level as compared to other traditional machine learning models

