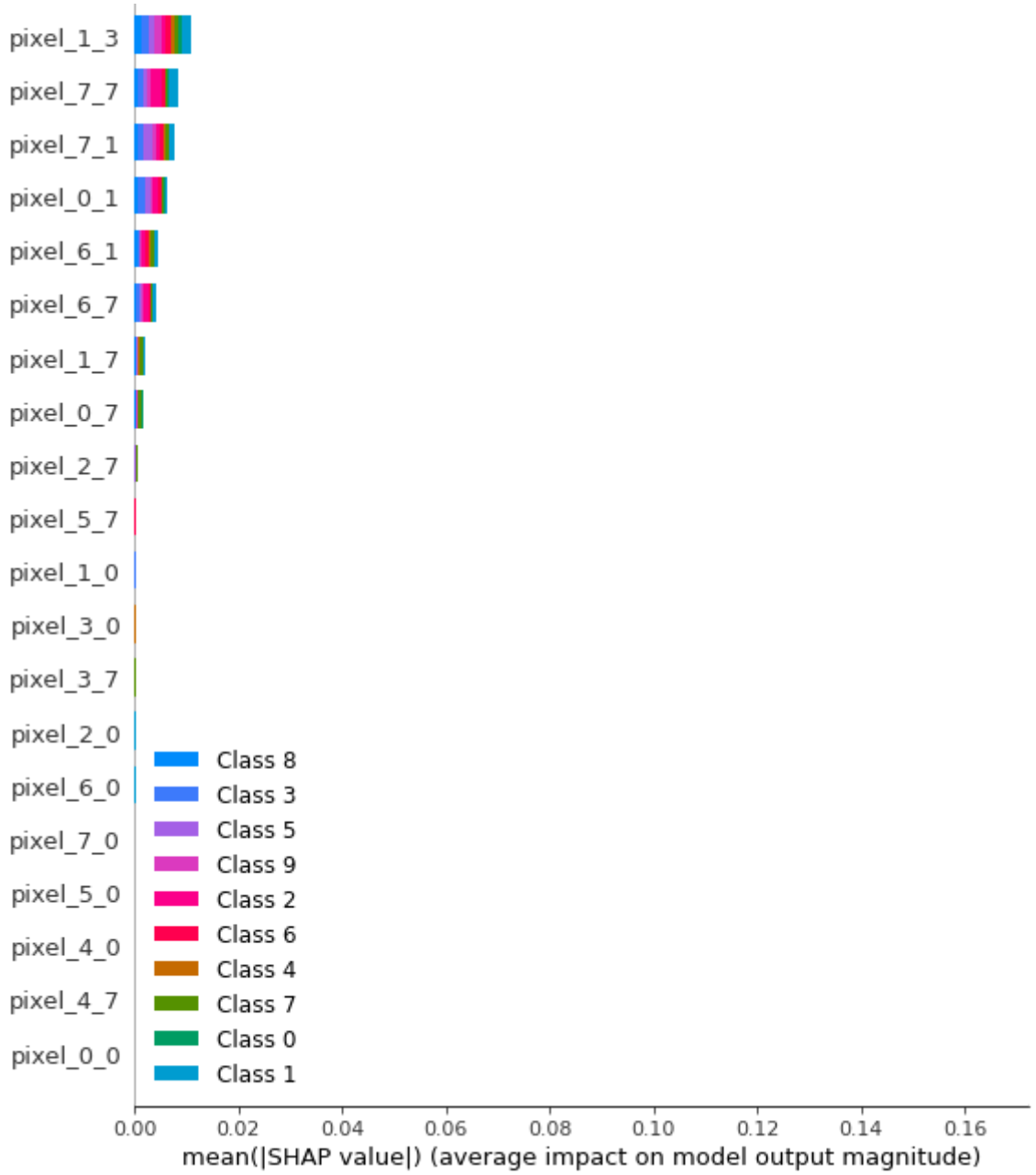
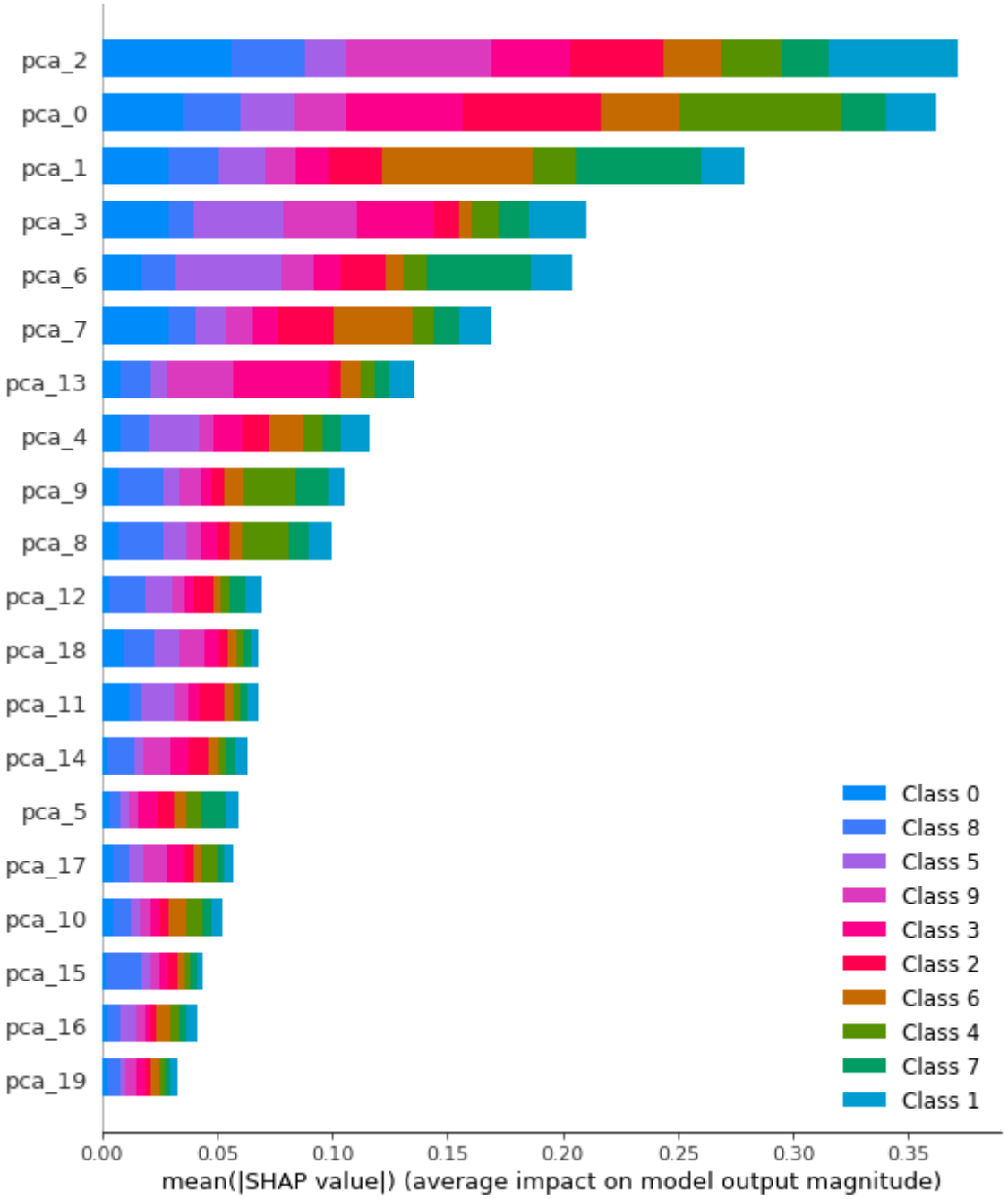
- For analysis used the digit dataset (8*8)
- Best models and their values of balanced accuracy after using the lazypredict module
    - ExtraTreesClassifier - 0.98
    - SVC - 0.98
    - KNeighborsClassifier - 0.97
- Result of applying module shap, for explaining model ExtraTreesClassifier (the last 20 values)
  For our analysis was decided to drop the last 12 features, with the almost zero impact



- Best models and their values of balanced accuracy after using the lazypredict module (the last 12 features dropped)
    - SVC - 0.99
    - ExtraTreesClassifier - 0.98
    - RandomForestClassifier - 0.97
- Shap module result after using PCA approach with 13 features (were used empiricPareto law)



- Best models and their values of balanced accuracy after using the lazypredict module after using PCA approach with 13 features
    - ExtraTreesClassifier - 0.95
    - SVC - 0.94
    - KNeighborsClassifier - 0.93
- Conclusions
    - The PCA approach leads to a more uniform distribution of the influence of features, slightly reduces the accuracy of the model, and significantly reduces computational costs
    - The approach of discarding insignificant features allows you to preserve the explainability of features, reduce noise in the data, and increase the accuracy of the model.