This **README\_ThreeClass.docx** file refers to the organization of the notebooks for the CAD Project: Task 2: **Melanoma Detection for 3 classes** (mel, bcc and scc). The notebooks adapted to solve the task are as follows:

1. Without Preprocessing
   1. Using Data Augmentation
      1. Using Color Histogram Features: T2\_Aug\_WoutP\_CHF
      2. Using Color Statistics Features: T2\_Aug\_WoutP\_CSF
      3. Using Texture GLCM features: T2\_Aug\_WoutP\_GLCMF
      4. Using Local Binary Pattern Histogram Features: T2\_Aug\_WoutP\_LBPHF\_LBPSF
      5. Using Local Binary Pattern Statistics Features: T2\_Aug\_WoutP\_LBPHF\_LBPSF
      6. Using SIFT and Bag of visual words: T2\_Aug\_WoutP\_SIFTBOWF
   2. Using SMOTE
      1. Using Color Histogram Features: T2\_SMOTE\_WoutP\_CHF
      2. Using Color Statistics Features: T2\_SMOTE\_WoutP\_CSF
      3. Using Texture GLCM features: T2\_SMOTE\_WoutP\_GLCMF
      4. Using Local Binary Pattern Histogram Features: T2\_SMOTE\_WoutP\_LBPHF\_LBPSF
      5. Using Local Binary Pattern Statistics Features: T2\_SMOTE\_WoutP\_LBPHF\_LBPSF
      6. Using SIFT and Bag of visual words: T2\_SMOTE\_WoutP\_SIFTBOWF
2. With Preprocessing
   1. Using Data Augmentation
      1. Using Color Histogram Features: T2\_Aug\_WP\_CHF
      2. Using Color Statistics Features: T2\_Aug\_WP\_CSF
      3. Using Texture GLCM features: T2\_Aug\_WP\_GLCMF
      4. Using Local Binary Pattern Histogram Features: T2\_Aug\_WP\_LBPHF\_LBPSF
      5. Using Local Binary Pattern Statistics Features: T2\_Aug\_WP\_LBPHF\_LBPSF
      6. Using SIFT and Bag of visual words: T2\_Aug\_WP\_SIFTBOWF
   2. Using SMOTE
      1. Using Color Histogram Features: T2\_SMOTE\_WP\_CHF
      2. Using Color Statistics Features: T2\_SMOTE\_WP\_CSF
      3. Using Texture GLCM features: T2\_SMOTE\_WP\_GLCMF
      4. Using Local Binary Pattern Histogram Features: T2\_SMOTE\_WP\_LBPHF\_LBPSF
      5. Using Local Binary Pattern Statistics Features: T2\_SMOTE\_WP\_LBPHF\_LBPSF
      6. Using SIFT and Bag of visual words: T2\_SMOTE\_WP\_SIFTBOWF
3. With Preprocessing (Hair Removal Only)
   1. Using Data Augmentation
      1. Using Color Histogram Features: T2\_Aug\_HR\_CHF
4. Ensemble of Classifiers
   1. Using Data Augmentation
      1. Using Color Histogram Features: T2\_Aug\_WoutP\_Ensemble\_Classifiers
5. Feature Mixing
   1. Using Data Augmentation
      1. Using Color Histogram Features: T2\_Aug\_WoutP\_CombinedFeatures
6. Color Space Analysis with Adaptive Histogram Equalization
   1. Using Data Augmentation
      1. Using BGR Color Space: T2\_Aug\_clahe\_BGRHF
      2. Using HSV Color Space: T2\_Aug\_clahe\_HSVHF
      3. Using Luv Color Space: T2\_Aug\_clahe\_LuvHF
      4. Using XYZ Color Space: T2\_Aug\_clahe\_XYZHF
7. Preprocessing Images (Image Preprocessing and Storing)
   1. Hair Removal + Vignette Removal: T2\_Preprocessing\_HRVR
   2. Only Hair Removal: T2\_Preprocessing\_HR
8. **Best Results and Test Prediction**
   1. **Using Data Augmentation**
      1. **Using HSV Color Histogram Features: T2\_Best**