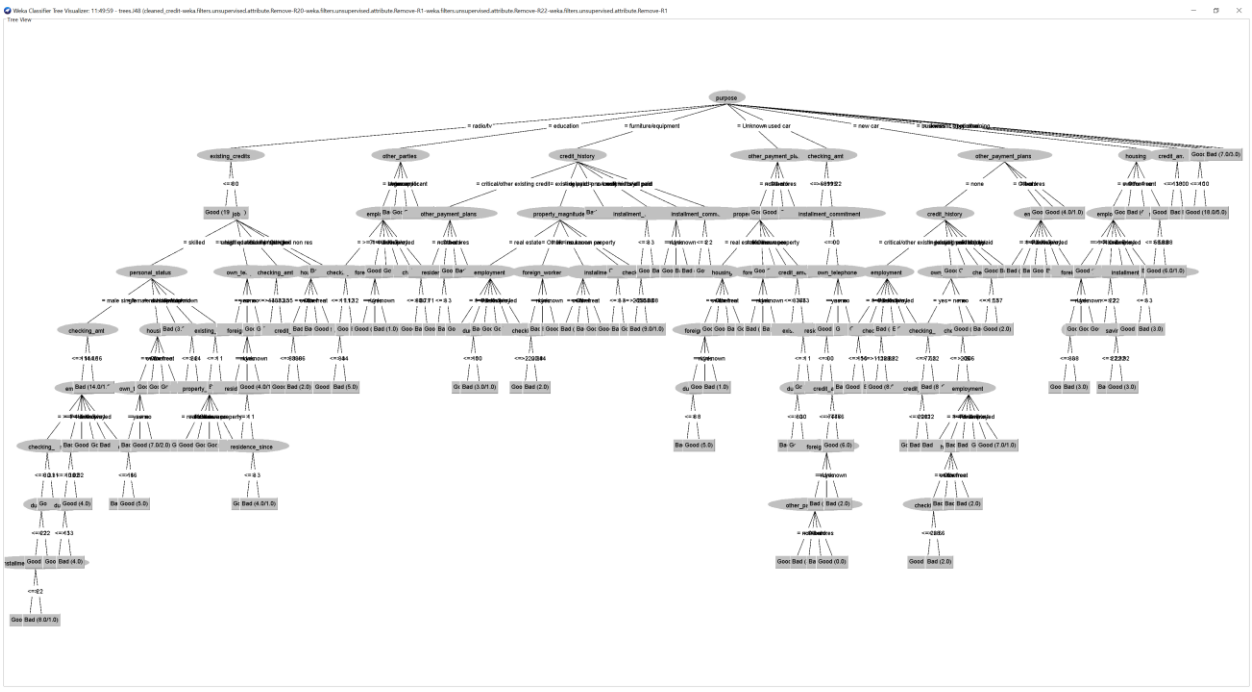
C4.5/J48

We have ran the J48 Decision trees in Weka. At first the dataset did not want to run on Weka but after digging into what attribute did not wanted to be use was “num_dependents”. After that started to yield some results. Choosing what result would give the lowest error rate. We determine that by removing “state”,“location”,”application_date”, and “num_dependents” chosen as the model that could handle the large dataset “credit” and 20 attributes.

```
Instances:    1004
Attributes:   20
              checking_amt
              duration
              credit_history
              purpose
              credit_amount
              savings
              employment
              installment_commitment
              personal_status
              other_parties
              residence_since
              property_magnitude
              age
              other_payment_plans
              housing
              existing_credits
              job
              own_telephone
              foreign_worker
              class

=== Summary ===

Correctly Classified Instances         843               83.9641 %
Incorrectly Classified Instances       161               16.0359 %
Kappa statistic                          0.6591
Mean absolute error                      0.231
Root mean squared error                  0.3398
Relative absolute error                 48.1026 %
Root relative squared error             69.3589 %
Total Number of Instances             1004

=== Detailed Accuracy By Class ===

                 TP Rate  FP Rate  Precision  Recall   F-Measure  MCC      ROC Area  PRC Area  Class
                 0.739    0.093    0.841      0.739    0.787      0.663    0.908     0.883     Bad
                 0.907    0.261    0.839      0.907    0.872      0.663    0.908     0.932     Good
Weighted Avg.    0.840    0.194    0.840      0.840    0.838      0.663    0.908     0.912

=== Confusion Matrix ===

   a   b   <-- classified as
 297 105 |   a = Bad
  56 546 |   b = Good
```



The output is in the form of a decision tree, The main attribute is “purpose”.