IS590DT Assignment3

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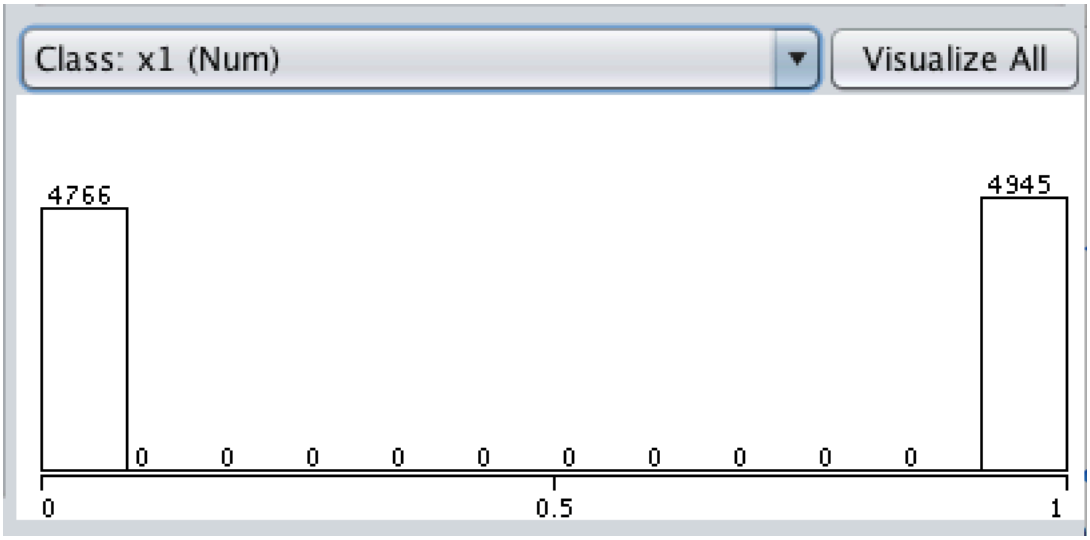
Step 1:

Select AddExpression filter, and input the following expression to get X1, X2 … and X7.

- The expression of X1:

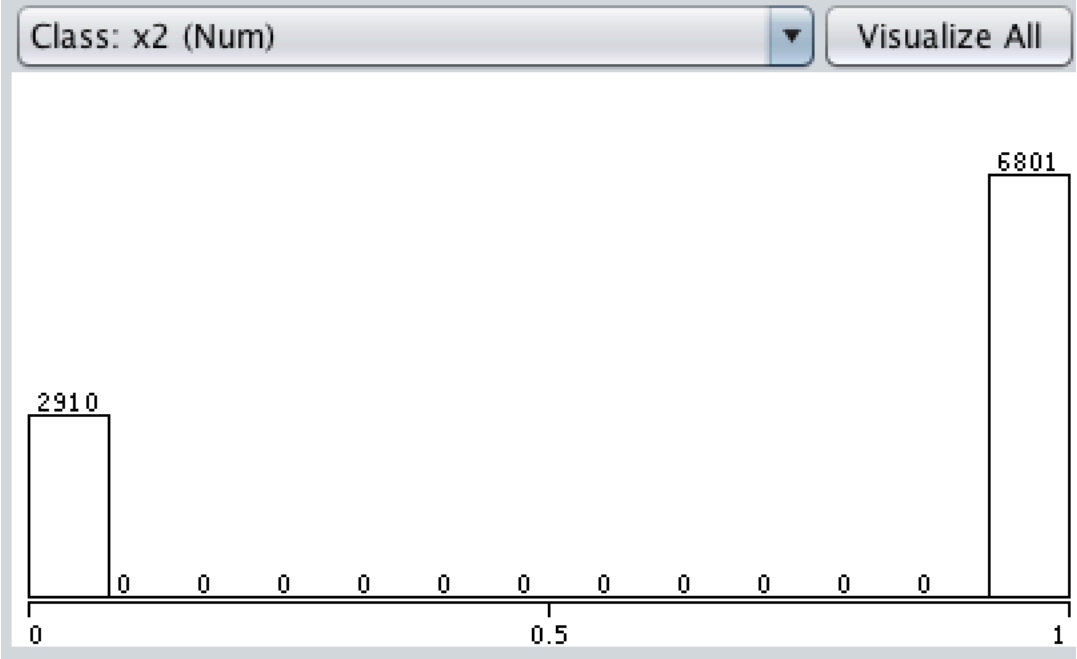
-E ifelse (((a6 > 1 or a2 < 1000) and (a7 > 1 or a3 < 1000)), 1, 0)



It is clear that there are 4766 X1 features equal to 0 and 4945 X1 features equal to 1.

- The expression of X2:

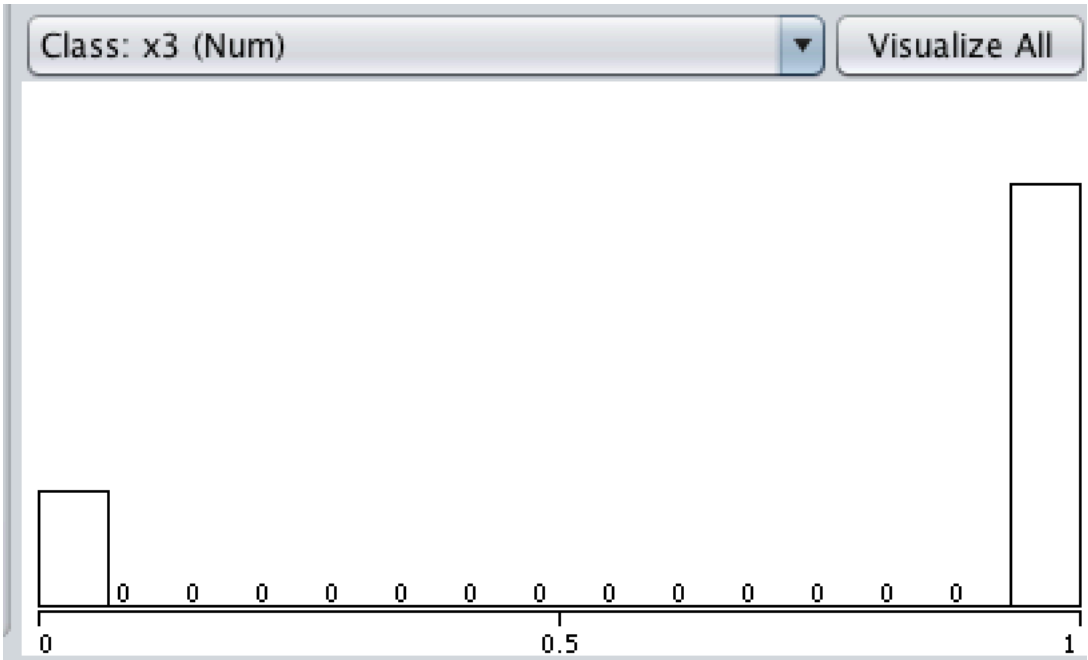
-E　“ifelse(a8 > 0 and a8 <=99999,1, ifelse(a8 = 99999,0.5, 0)　)”



It is clear that there are 2910 X2 features equal to 0 and 6801 X2 features equal to 1.

- The expression of X3:

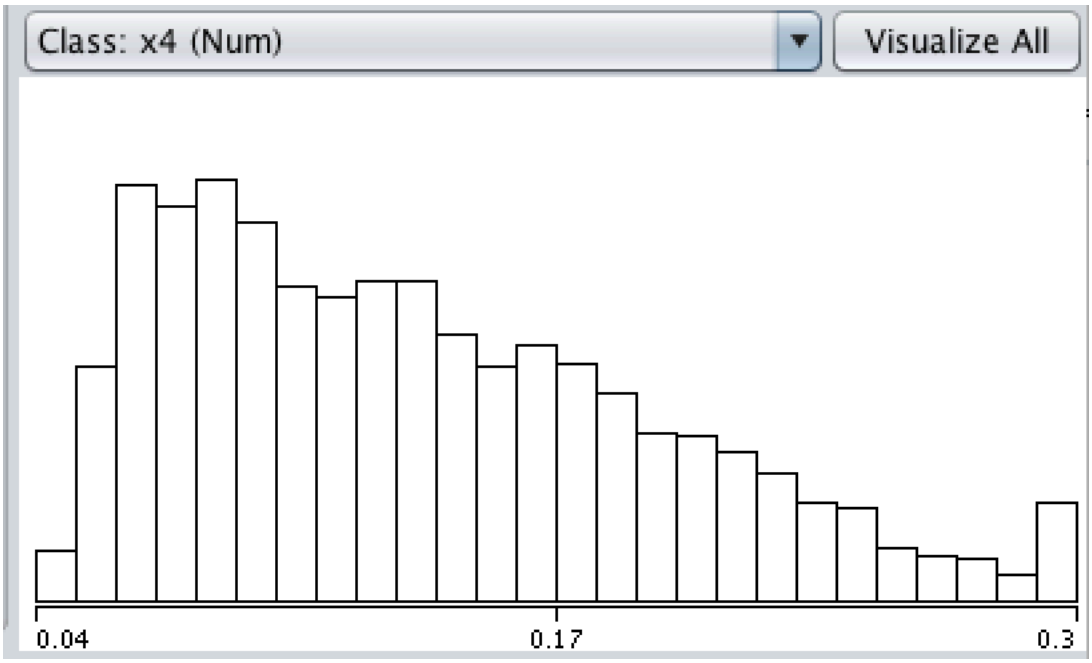
-E "ifelse (((a6 > 1 or a2 < 1000) and (a7 > 1 or a3 < 1000)), 1, 0)"



There are 2058 X3 features equal to 0 and 7652 X3 features equal to 1.

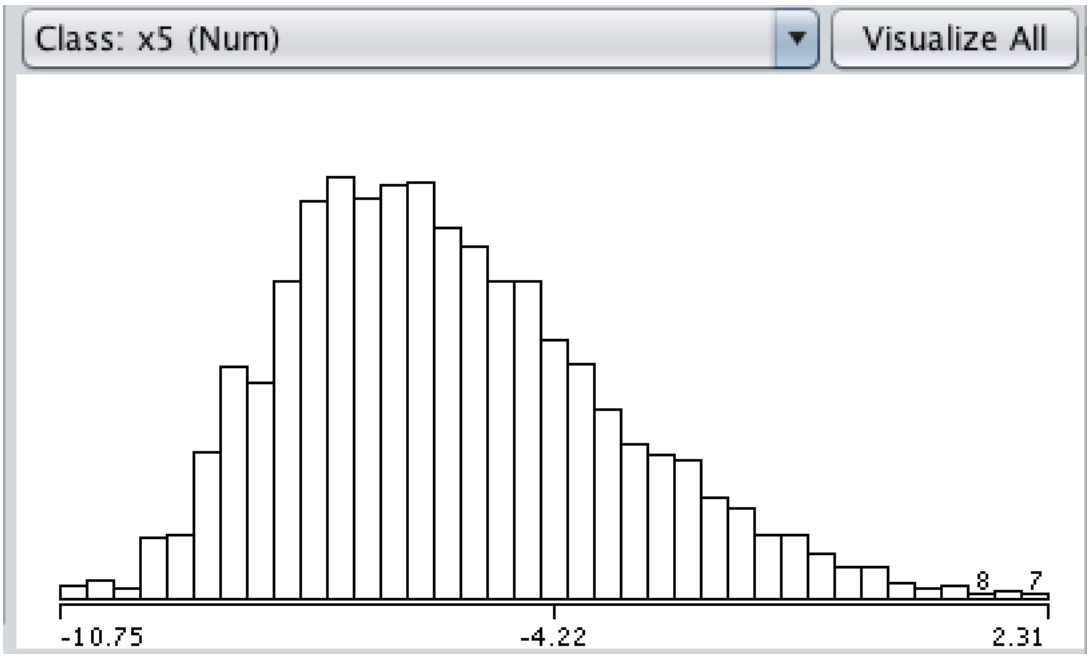
- The expression of X4:

-E "ifelse(a10<0.3, a10, 0.3)"



- The expression of X5:

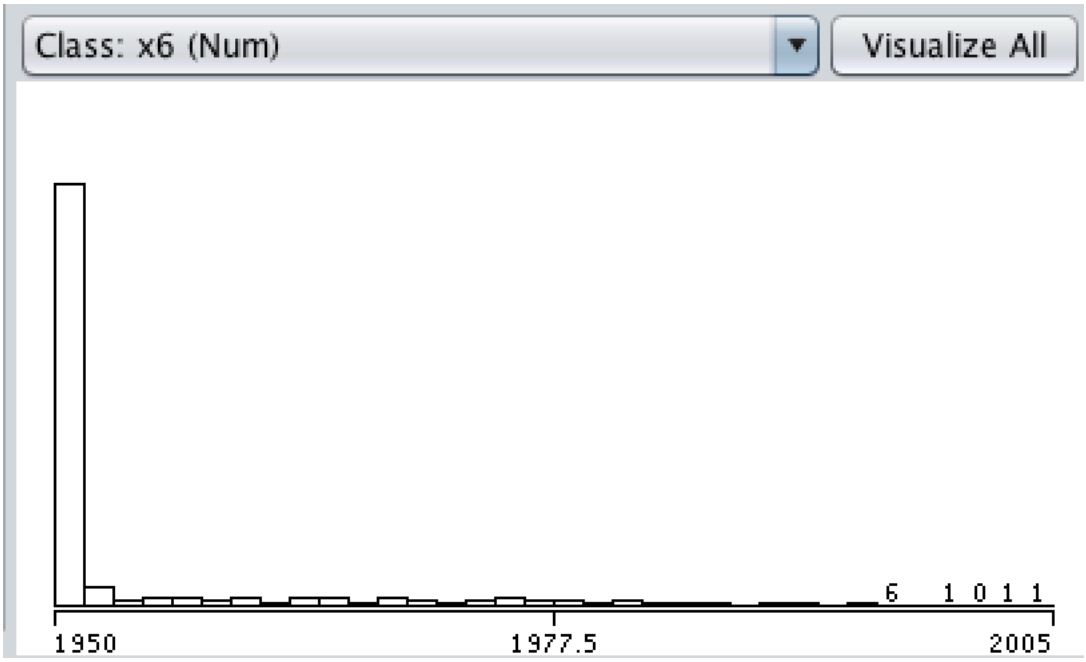
-E "- (abs(log(a11)) - 3)"



- The expression of X6

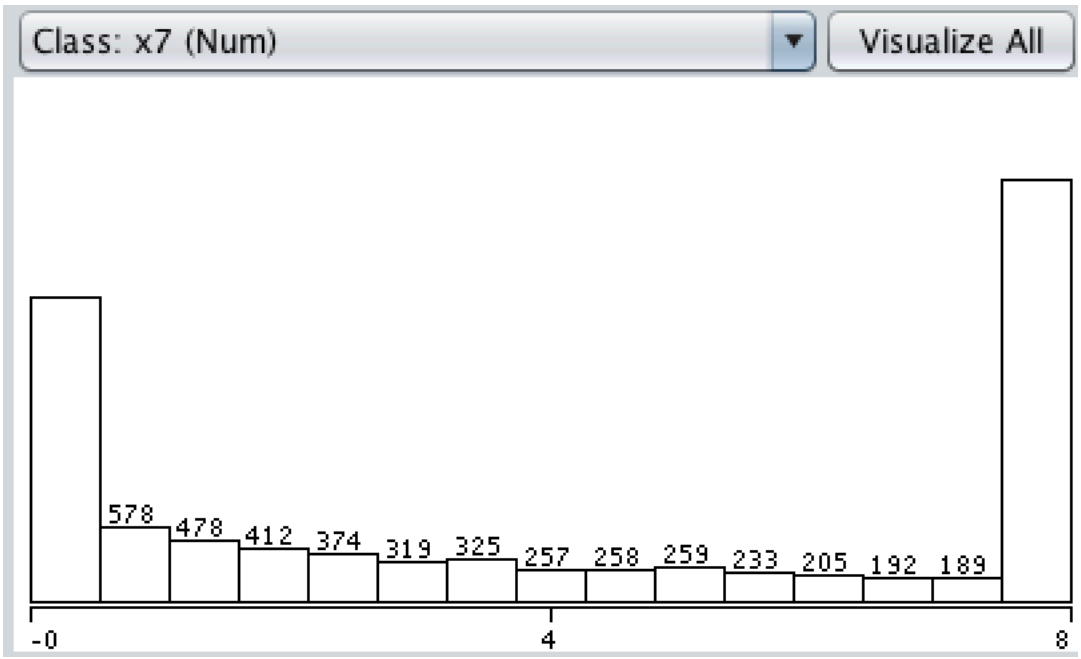
  Eifelse(1950 > ifelse(2005<a12,2005,a12),1950, ifelse(2005<a12,2005,a12))-

  Nx6 (9711 instances)



- The expression of X7

  -E ifelse(8 < -log(a13+0.000000001), 8,-log(a13+0.000000001))



Step 2:

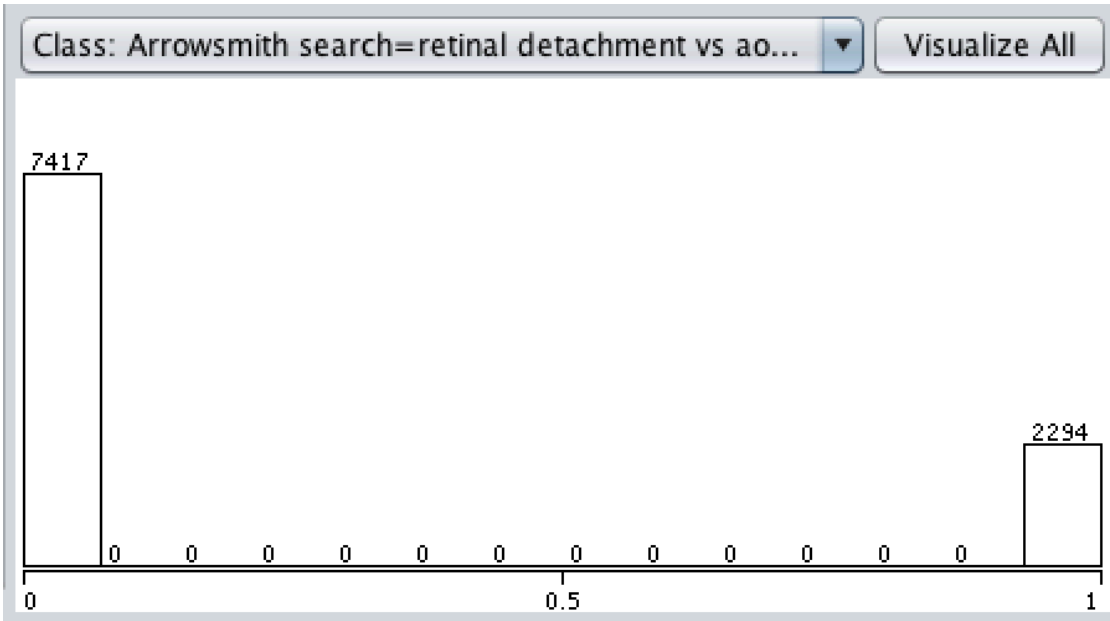
Select NumerictoBinary, and apply it to ArrowSmith attribute. Specifically, set attributeIndices = 1

In this way, we decompose ArrowSmith into 6 subparts.

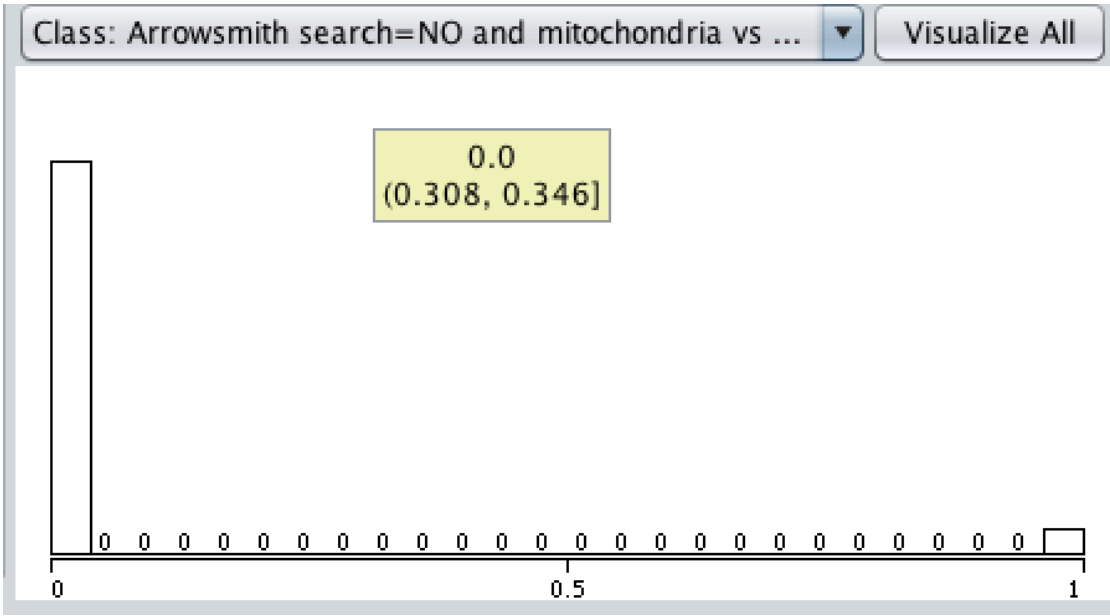
"NomialToBinary –R 1"

Then we get

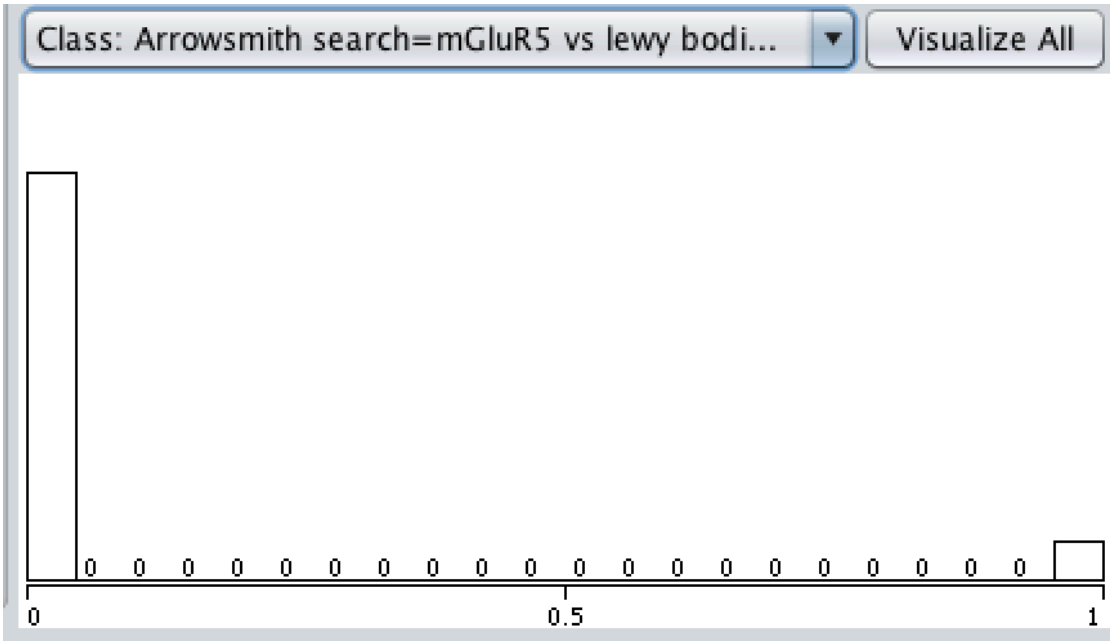
- I1 = Arrowsmith search = retinal detachment vs aortic aneyrsm



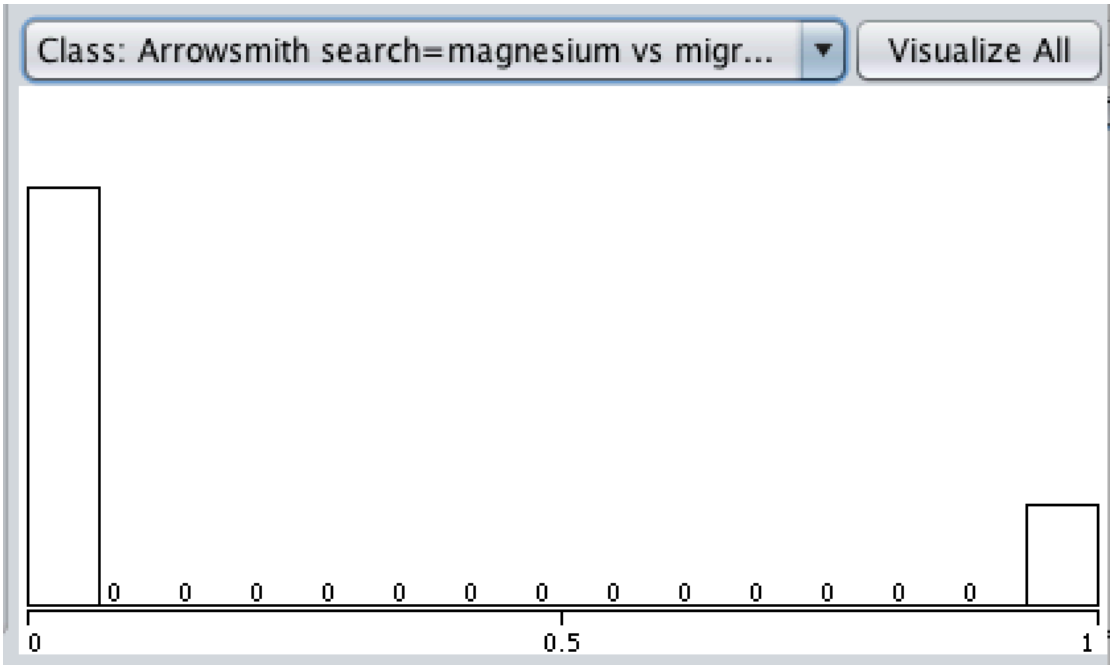
- I2 = Arrowsmith search = NO and mitochondria vs PSD



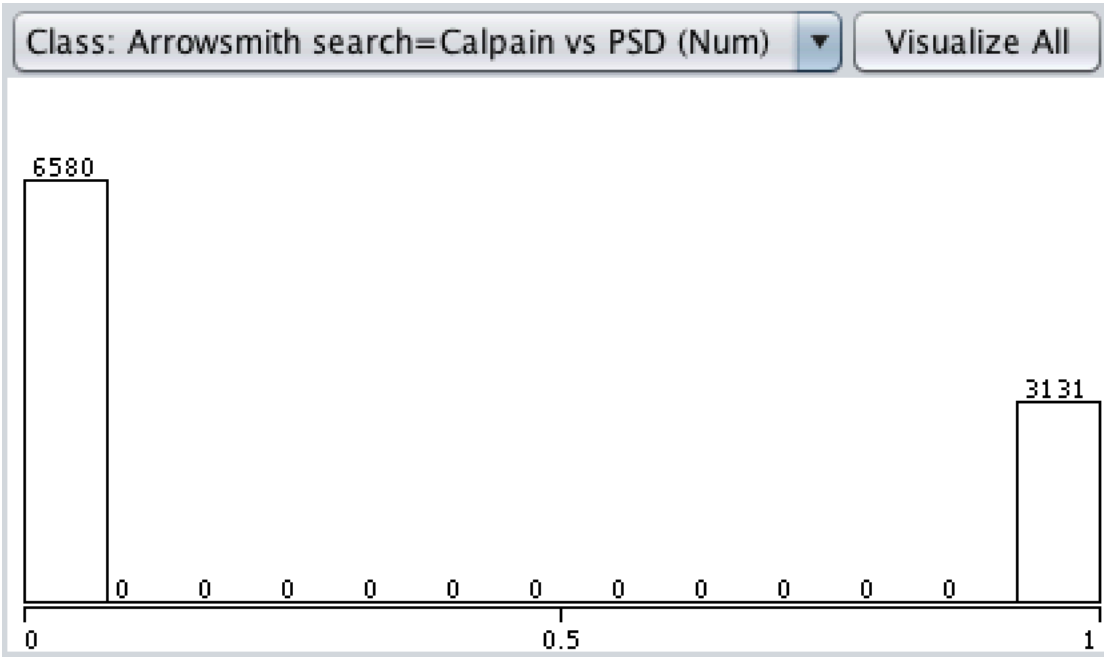
- I3 = Arrowsmith search = mGluR5 vs lewy bodies



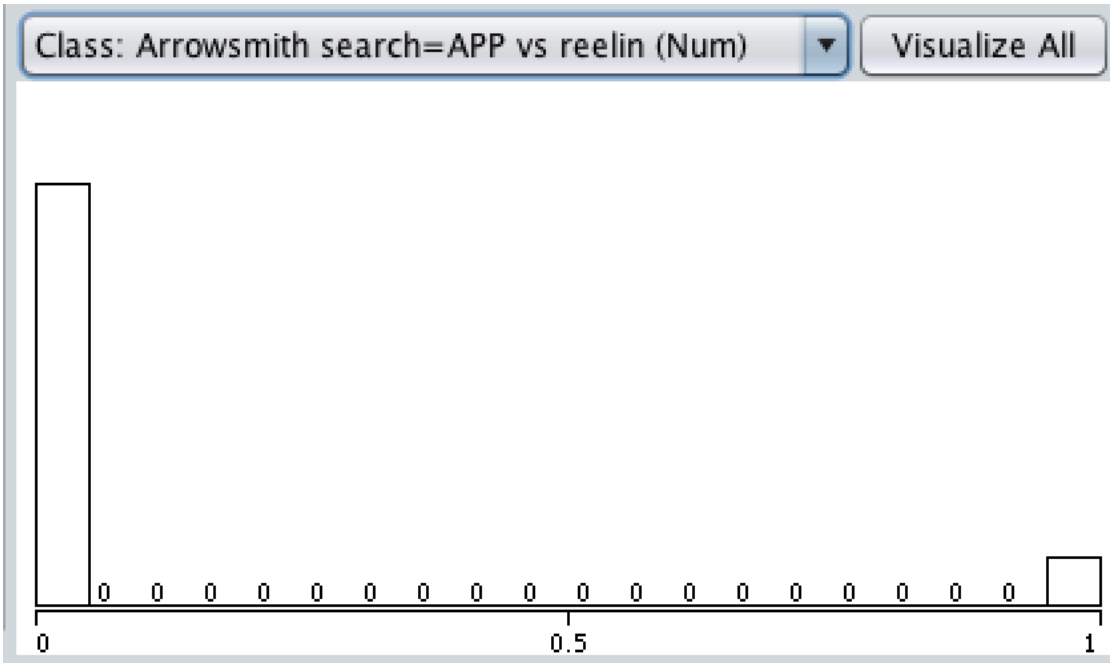
- I4 = Arrowsmith search = magnesium vs migranine



- I5 = Arrowsmith search = Calpain vs PSD

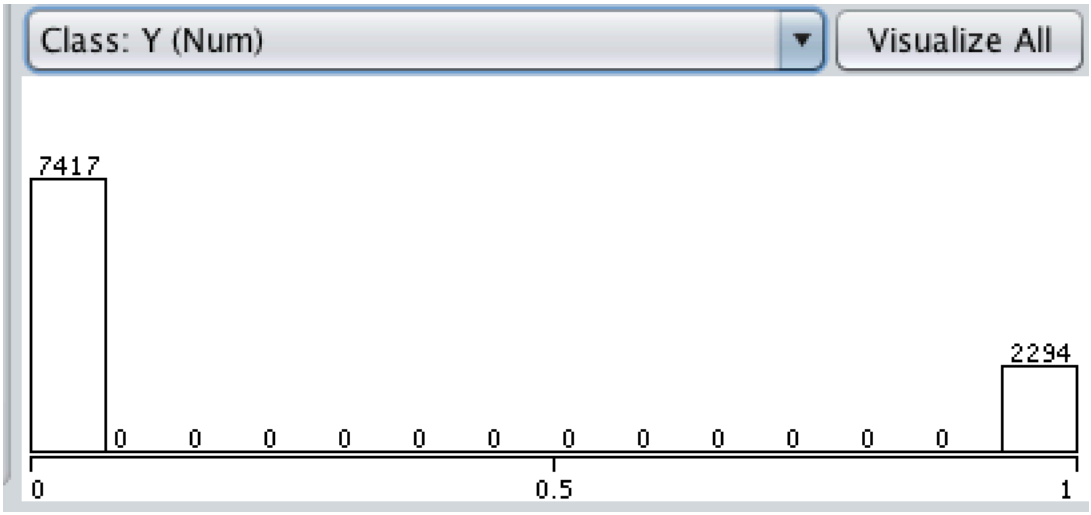


- I6 = Arrowsmith search = APP vs reelin



- The expression of Y

"ifelse(a10 = 0 or a10 = 2,1,0)"



After applying ArrowSmith to target, we have 7417 Y features equal to 0 and 2294 Y features equal to 1.