Decision Trees

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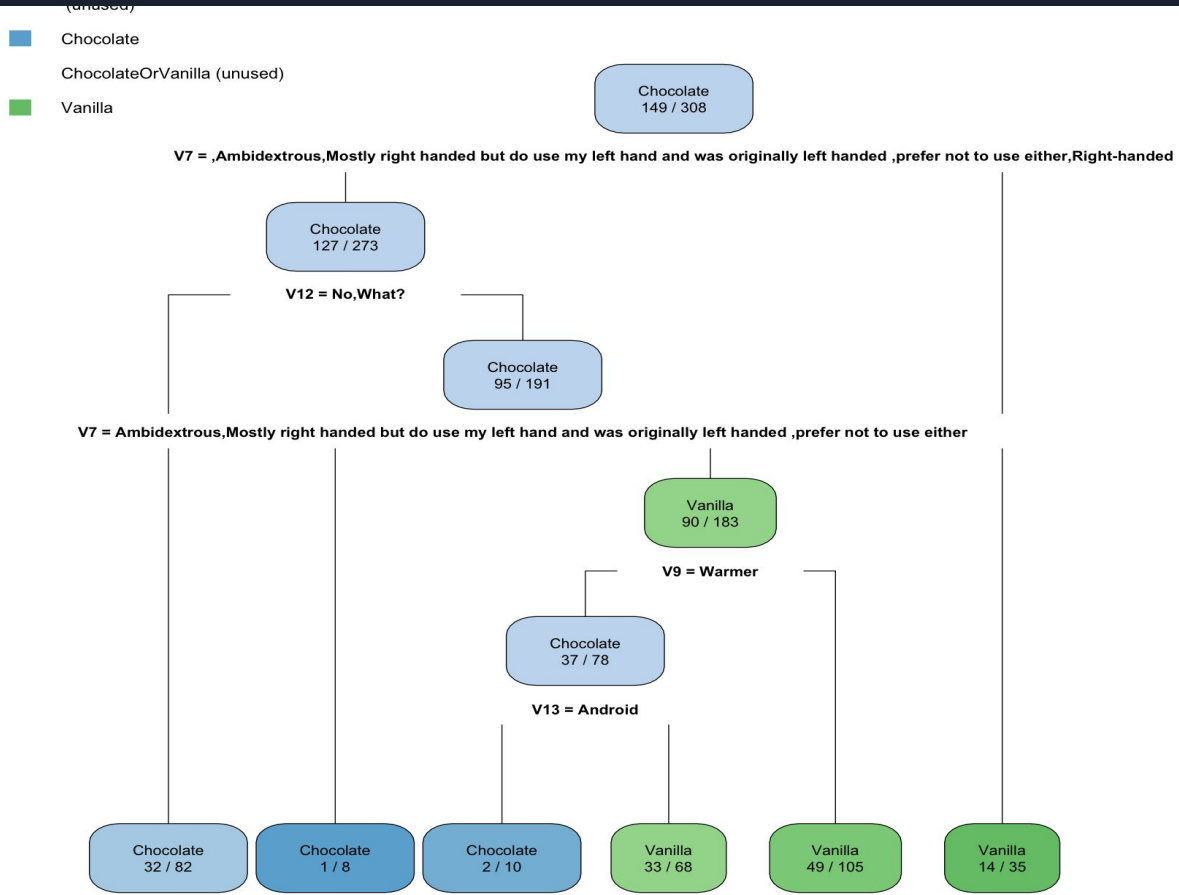

Chocolate
ChocolateOrVanilla (unused)
Vanilla
Chocolate
149 / 308
V7 = ,Ambidextrous,Mostly right handed but do use my left hand and was originally left handed ,prefer not to use either,Right-handed
Chocolate
127 / 273
V12 = No,What?
Chocolate
95 / 191
V7 = Ambidextrous,Mostly right handed but do use my left hand and was originally left handed ,prefer not to use either
Vanilla
90 / 183
V9 = Warmer
Chocolate
37 / 78
V13 = Android
Chocolate
32 / 82
Chocolate
1 / 8
Chocolate
2 / 10
Vanilla
33 / 68
Vanilla
49 / 105
Vanilla
14 / 35

ChocolateOrVanilla Tree

```
Dtree1 <-  rpart(V6 ~ V7 + V9 + V12 + V13, data = ExpandedF22DataSurveyAnonymized)

rpart.plot(Dtree1)
```

Errors

Classification tree:
rpart(formula = V6 ~ V7 + V9 + V12 + V13, data = ExpandedF22DataSurveyAnonymized)

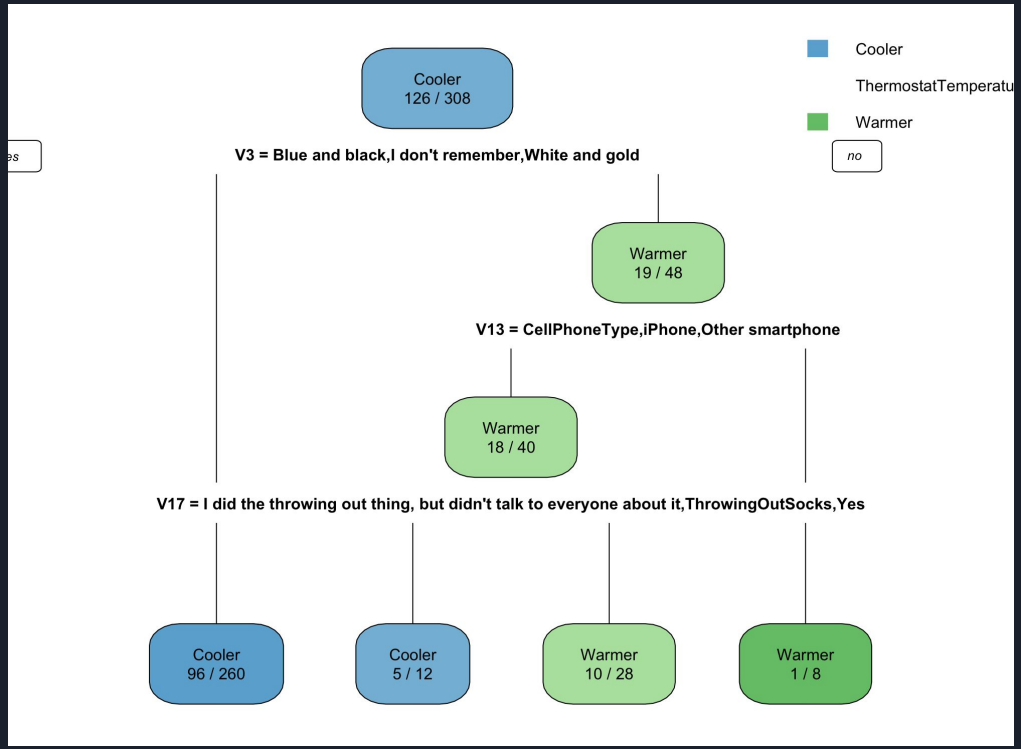
Variables actually used in tree construction:
[1] V12 V13 V7 V9

Root node error: 149/308 = 0.48377

n= 308

	CP	nsplit	rel error	xerror	xstd
1	0.053691	0	1.00000	1.0000	0.058861
2	0.017897	1	0.94631	1.0738	0.058848
3	0.013423	4	0.89262	1.0805	0.058832
4	0.010000	5	0.87919	1.0470	0.058887

ThermostatTemperature



```
Dtree2 <-  rpart(V9 ~ V6 + V3 + V17 + V13, data = ExpandedF22DataSurveyAnonymized)

rpart.plot(Dtree2, extra = 3)
```

Errors

printcp(rpart(V9 ~ V6 + V3 + V17 + V13, data = ExpandedF22DataSurveyAnonymized))

Classification tree:
rpart(formula = V9 ~ V6 + V3 + V17 + V13, data = ExpandedF22DataSurveyAnonymized)

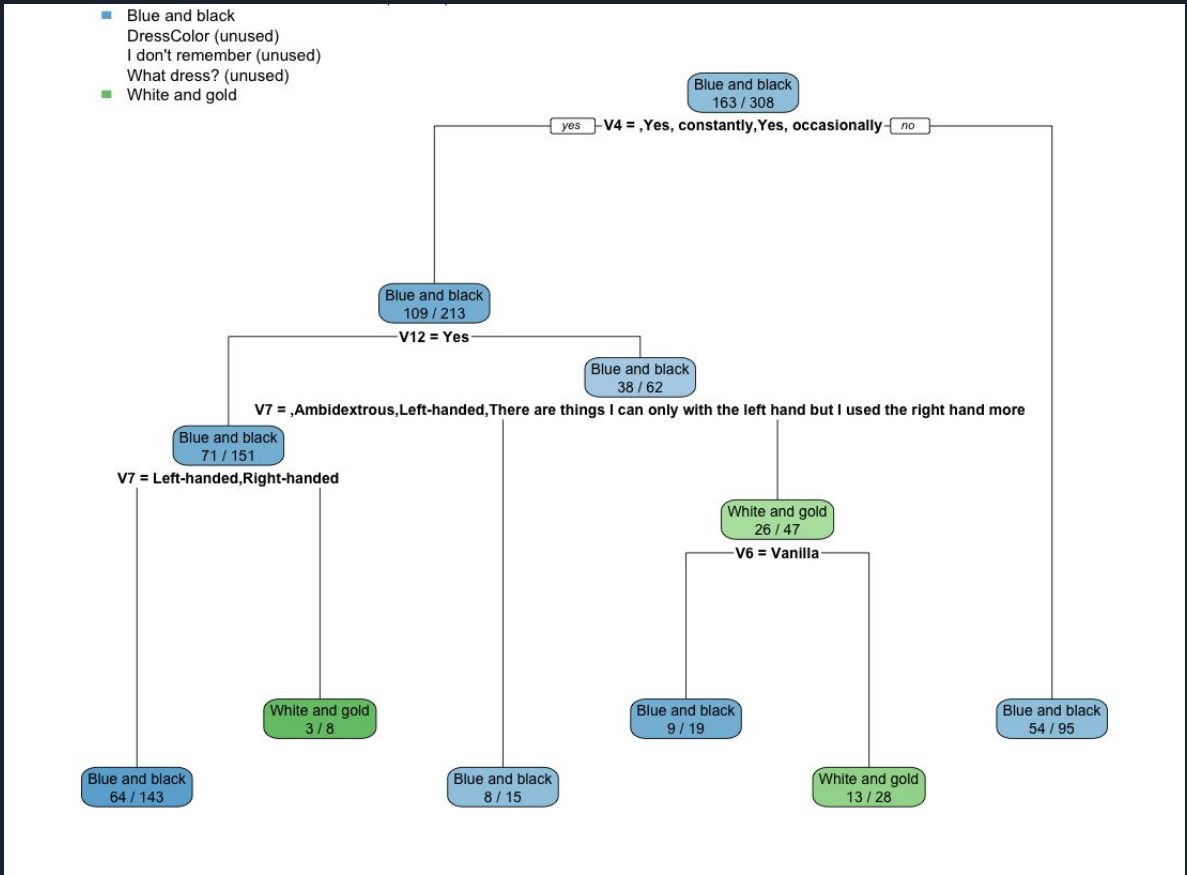
Variables actually used in tree construction:
[1] V13 V17 V3

Root node error: 126/308 = 0.40909

n= 308

	CP	nsplit	rel error	xerror	xstd
1	0.087302	0	1.00000	1.00000	0.068482
2	0.011905	1	0.91270	0.91270	0.067372
3	0.010000	3	0.88889	0.95238	0.067924

DressColor


Blue and black
DressColor (unused)
I don't remember (unused)
What dress? (unused)
White and gold
Blue and black
163 / 308
yes
V4 = ,Yes, constantly,Yes, occasionally
no
Blue and black
109 / 213
V12 = Yes
Blue and black
38 / 62
V7 = ,Ambidextrous,Left-handed,There are things I can only with the left hand but I used the right hand more
Blue and black
71 / 151
V7 = Left-handed,Right-handed
White and gold
26 / 47
V6 = Vanilla
White and gold
3 / 8
Blue and black
9 / 19
Blue and black
54 / 95
Blue and black
64 / 143
Blue and black
8 / 15
White and gold
13 / 28

```
Dtree3 <-  rpart(V3 ~ V4 + V6 + V7 + V12, data = ExpandedF22DataSurveyAnonymized)
> rpart.plot(Dtree3, extra = 3)
```

Errors

printcp(rpart(V3 ~ V4 + V6 + V7 + V12, data = ExpandedF22DataSurveyAnonymized))

Classification tree:
rpart(formula = V3 ~ V4 + V6 + V7 + V12, data = ExpandedF22DataSurveyAnonymized)

Variables actually used in tree construction:
[1] V12 V4 V6 V7

Root node error: 163/308 = 0.52922

n= 308

	CP	nsplit	rel error	xerror	xstd
1	0.014724	0	1.00000	1.00000	0.053742
2	0.010000	5	0.92638	0.99387	0.053761