

## 5-9-12

1. a. Linear because you can draw a straight line to separate them  
b. NuSVC because the pattern is circular so a polynomial would be better at predicting rather than a straight line
2.
  1. if (age < 30) and (student == no): no
  2. if (age < 30) and (student == yes): yes
  3. if (age >= 30 and age <= 40): yes
  4. if (age > 40) and (credit\_rating == excellent): yes
  5. if (age > 40) and (credit\_rating == fair): no
3. a  
if (refund == yes):  
Dont audit  
else:  
if (95k >= taxable income >= 85k):  
audit  
else:  
Dont audit