

Training Data

Spam? E-mail body

1 Money is free now
 0 Pat teach 315
 0 Pat free to teach
 1 Sir money to teach
 1 Pat free money now
 0 Teach 315 now
 0 Pat to teach 315

Vocabulary

315
 free
 is
 money
 now
 Pat
 Sir
 teach
 to
 tomorrow

$p(Y = 0)$	$p(Y = 1)$

m	$p(X_m = 1 Y = 0)$	$p(X_m = 1 Y = 1)$
315		
free		
is		
money		
now		
Pat		
Sir		
teach		
to		
tomorrow		

Test Data

Spam? E-mail body

Pat teach now

m	x	$p(X_m = x \mid Y = 0)$	$p(X_m = x \mid Y = 1)$
315			
free			
is			
money			
now			
Pat			
Sir			
teach			
to			
tomorrow			

$p(Y = 0)$	$p(Y = 1)$

Pat teach now

$p(Y = 0, X_1, \dots, X_M)$	$p(Y = 1, X_1, \dots, X_M)$

Pat teach now

$p(Y = 0 \mid X_1, \dots, X_M)$	$p(Y = 1 \mid X_1, \dots, X_M)$