

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

$p(Y = 0)$	$p(Y = 1)$
4/7	3/7

m	$p(X_m = 1 \mid Y = 0)$	$p(X_m = 1 \mid Y = 1)$
315	4/6	1/5
free	2/6	3/5
is	1/6	2/5
money	1/6	4/5
now	2/6	3/5
Pat	4/6	2/5
Sir	1/6	2/5
teach	5/6	2/5
to	3/6	2/5
tomorrow	1/6	1/5

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	0	2/6	4/5
free	0	4/6	2/5
is	0	5/6	3/5
money	0	5/6	1/5
now	1	2/6	3/5
Pat	1	4/6	2/5
Sir	0	5/6	3/5
teach	1	5/6	2/5
to	0	3/6	3/5
tomorrow	0	5/6	4/5

$p(Y = 0)$	$p(Y = 1)$
4/7	3/7

Pat teach now

$p(Y = 0, X_1, \dots, X_M)$	$p(Y = 1, X_1, \dots, X_M)$
0.0057	0.0006

Pat teach now

$p(Y = 0 \mid X_1, \dots, X_M)$	$p(Y = 1 \mid X_1, \dots, X_M)$
0.903	0.097