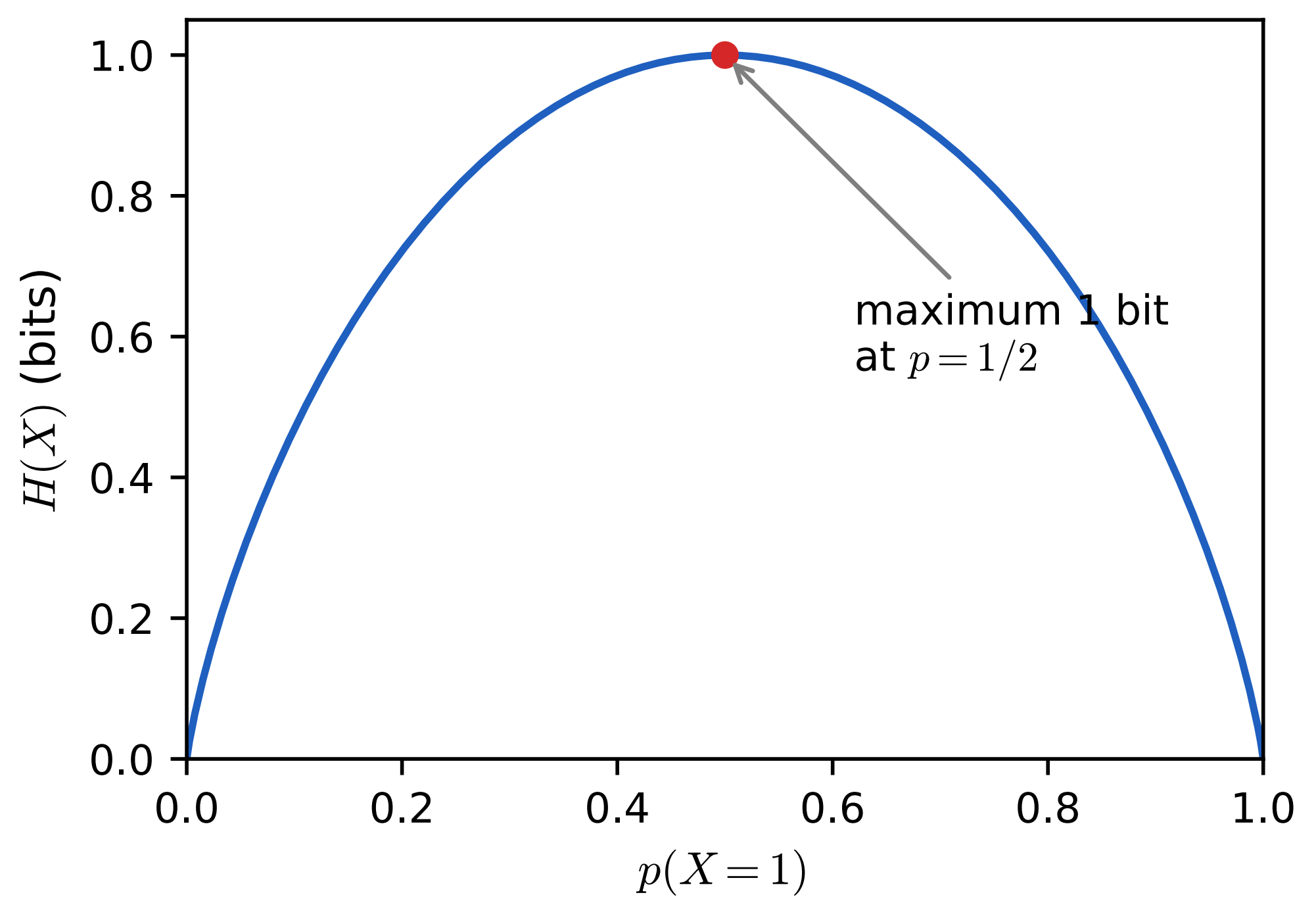

1.0
0.8
0.6
0.4
0.2
0.0
$H(X)$ (bits)
0.0
0.2
0.4
0.6
0.8
1.0
$p(X=1)$
maximum 1 bit
at $p=1/2$