Maximum Likelihood Estimation to the Rescue!

But those are just data.

How do we find prob(M AND E)?

Maximum likelihood estimation!

prob(M AND E) = 9,652 / 100,000 = 0.09652

is the **most likely** to have generated
9,652 instances out of 100,000.

Similarly, we estimate
prob(E) = 21,137/100,000 = 0.21137