**1. How does your email service know which emails are spam and which aren't?**

Different techniques are used by email systems to distinguish between spam and legitimate communications. Utilizing machine learning algorithms to examine email content and compare it to a database of known spam emails is one approach. If an email contains multiple of the key terms and phrases that are frequently found in spam emails, the algorithm will classify the email as spam.

**2. What kind of data can be analyzed about emails to make this decision?**

The machine learning algorithm examines a number of variables while evaluating whether an email is spam. These elements may include the email address of the sender, the email subject, and the email body. If an email contains multiple of the key terms and phrases that are frequently found in spam emails, the algorithm will classify the email as spam.

**3. How do you design a test that a computer system can perform to determine if an email is spam?**

You must first construct a set of well-known spam emails before you can design a test that a computer system can employ to evaluate whether an email is spam. The algorithm may then examine fresh emails' content and compare it to known spam emails. The new email can be labelled as spam if it has several of the same key phrases as the known spam emails.

**References:**

https://www.quora.com/How-does-a-machine-learning-algorithm-know-which-emails-are-spam-and-which-arent

<https://www.kdnuggets.com/2017/11/machine-learning-spam-filtering.html>

https://aws.amazon.com/machine-learning/what-is-machine-learning/

https://towardsdatascience.com/how-does-your-email-service-know-which-emails-are-spam-and-which-arent-fbaa056e05f5