1.   1 / 1 punto

You are building a system to detect if computers in a data center are malfunctioning. You have 10,000 data points of computers functioning well, and no data from computers malfunctioning. What type of algorithm should you use?

- ⦿ Anomaly detection

- ◯ Supervised learning

> ⊘ **Correcto**
> Creating an anomaly detection model does not require labeled data.

2.   1 / 1 punto

You are building a system to detect if computers in a data center are malfunctioning. You have 10,000 data points of computers functioning well, and 10,000 data points of computers malfunctioning. What type of algorithm should you use?

- ◯ Anomaly detection

- ⦿ Supervised learning

> ⊘ **Correcto**
> You have a sufficient number of anomalous examples to build a supervised learning model.

3.   1 / 1 punto

Say you have 5,000 examples of normal airplane engines, and 15 examples of anomalous engines. How would you use the 15 examples of anomalous engines to evaluate your anomaly detection algorithm?

- ◯ Use it during training by fitting one Gaussian model to the normal engines, and a different Gaussian model to the anomalous engines.

- ◯ You cannot evaluate an anomaly detection algorithm because it is an unsupervised learning algorithm.

◉ Put the data of anomalous engines (together with some normal engines) in the cross-validation and/or test sets to measure if the learned model can correctly detect anomalous engines.

◯ Because you have data of both normal and anomalous engines, don't use anomaly detection. Use supervised learning instead.

> ✓ **Correcto**
> Anomalous examples are used to evaluate rather than train the model.

4. Anomaly detection flags a new input x as an anomaly if $p(x) < \epsilon$. If we reduce the value of ϵ, what happens?

    1 / 1 punto

◯ The algorithm is more likely to classify new examples as an anomaly.

◉ The algorithm is less likely to classify new examples as an anomaly.

◯ The algorithm is more likely to classify some examples as an anomaly, and less likely to classify some examples as an anomaly. It depends on the example x.

◯ The algorithm will automatically choose parameters μ and σ to decrease $p(x)$ and compensate.

> ✓ **Correcto**
> When ϵse reduce, se reduce la probabilidad de que un evento sea clasificado como anomalía.

5. Está monitoreando la temperatura y la intensidad de la vibración en motores de aviones recién fabricados. Ha medido 100 motores y ajustado el modelo gaussiano descrito en las conferencias en video a los datos. Los 100 ejemplos y las distribuciones resultantes se muestran en la siguiente figura.

    1 / 1 punto

Las medidas del motor más reciente que está probando tienen una temperatura de 17,5 y una intensidad de vibración de 48. Estas se muestran en magenta en la siguiente figura. ¿Cuál es la probabilidad de que un motor tenga estas dos medidas?
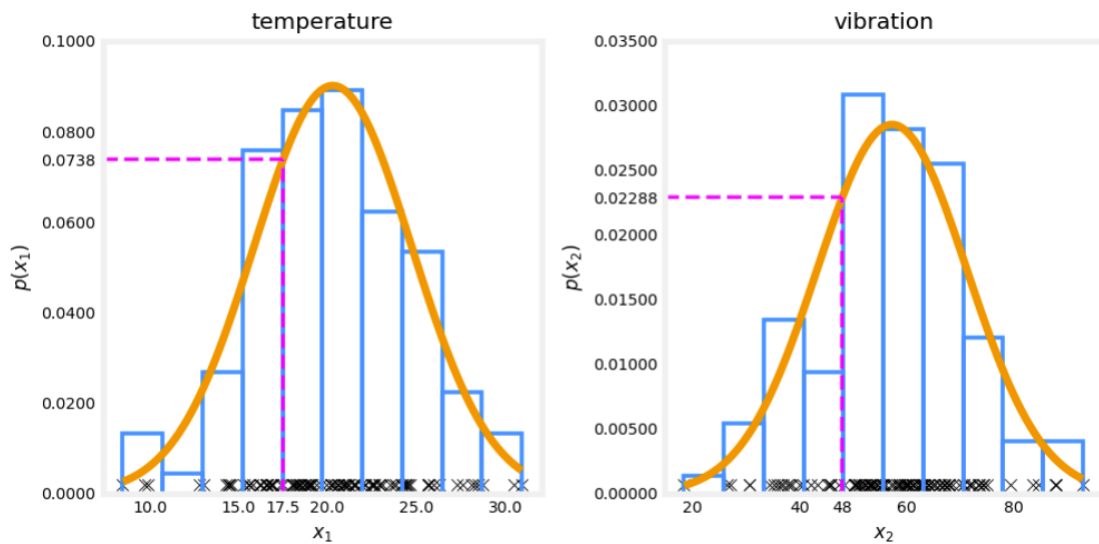
- ⭕ 17.5 * 48 = 840
- ⭕ 17.5 + 48 = 65.5
- 🔘 0.0738 * 0.02288 = 0.00169
- ⭕ 0.0738 + 0.02288 = 0.0966

> ✅ **Correcto**
> Según el modelo descrito en la lección, p(A, B) = p(A) * p(B). .