

## 1. How you'd support students struggling with concepts or deadlines?

Reflecting on my experience in a fast-paced bootcamp, I faced the challenge of mastering new skills and completing a project within a month. To manage this, I used the Feynman Technique, which helped me simplify complex concepts and make them more digestible.

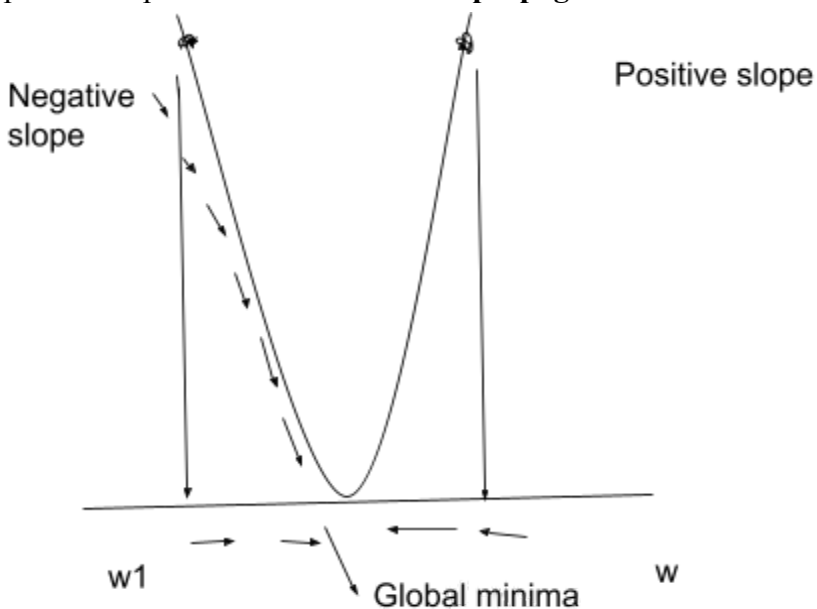
External resources like Krish Naik's YouTube channel were invaluable, offering clear and in-depth explanations that made it feel like I was progressing, even when the learning curve was steep. I believe it's important to reassure students that struggling is normal—it's part of the process.

I recommend that students develop personalized strategies, such as setting aside time each evening to review what they've learned and jot down insights or questions. Repeating the process—watching videos, revisiting notes—helps reinforce understanding and retention. Above all, creating a supportive environment where students feel it's okay to struggle is essential to overcoming challenges.

## 2. How you would break down a complex topic like "Gradient Descent" for beginners.

Gradient Descent is an optimization method used to minimize the error in machine learning models by adjusting weights. Imagine a parabolic curve where the top represents high error. The goal is to move the weights towards the **lowest point** of the curve, where the error is minimal.

To do this, we calculate the **derivative** (slope) of the curve at each point. If the slope is positive, we decrease the weights to move downhill; if it's negative, we increase the weights to move uphill. This process is known as **backpropagation**.



The size of each adjustment is controlled by the **learning rate**. Too large a rate could overshoot the minimum, while too small a rate could make the process slow.

By repeating this process, the weights gradually adjust, moving closer to the global minimum, where the model's error is the lowest, and optimal performance is achieved.