**Calculate the ideal n\_fft and hop\_length\_fft values for**

**128x128 spectrograms**

**Time bins = (frame\_length - n\_fft) / hop\_length\_fft + 1 = 128**

**Solve for hop\_length\_fft = (frame\_length - n\_fft) / (128 - 1)**

**Calculate n\_fft:**

For 128 frequency bins: n\_fft/2 + 1 = 128

Therefore n\_fft = **254**

**Calculate the ideal n\_fft and hop\_length\_fft values for**

**512x512 spectrograms**

**Time bins = (frame\_length - n\_fft) / hop\_length\_fft + 1 = 512**

**Solve for hop\_length\_fft = (frame\_length - n\_fft) / (512 - 1)**

**Calculate n\_fft:**

For 512 frequency bins: n\_fft/2 + 1 = 512

Therefore n\_fft = **1022**