

**User:**

Hi, nice to meet you.

**Assistant:**

Hello! It's nice to meet you too. Thank you for taking the time to speak with me today about the Entry-Level Machine Learning Engineer position at Mozilla.ai. To start, could you tell me about your experience with machine learning and any projects you've worked on in this area?

**User:**

Sure, I'd be happy to. I have a couple of years of experience in machine learning. I've made use of certain techniques before like deep learning and image analysis. I've used OpenCV and TensorFlow.

**Assistant:**

That's great to hear. Can you tell me more about a specific machine learning project you've worked on, particularly one that involved deep learning? What was your role, and what challenges did you face?

**User:**

Sure, I worked on a project once where we had to analyze resistors to identify their resistances. So to do this we built a convolutional neural network and we used several layers in this network. By the end of it we were able to detect resistors in the image. Then we used a different AI technique that I didn't actually work on to classify the colors on each of the bands and then calculate the resistance.

**Assistant:**

Interesting project. How did you handle the data preprocessing and augmentation for training your convolutional neural network? And what tools or frameworks did you use for experiment tracking and model management?

**User:**

Sure, in terms of the data pre-processing, there wasn't actually a whole lot that we needed to do. Since we just took images of a large amount of resistors and then manually cropped them down to be a specific resolution using a little Python tool that we made. And then we didn't need to augment the data because we just manually took around 10,000 images. The way that we got so many was by just lining up a large amount of resistors in an image. So we were doing around 100 resistors at a time. So in 100 images, we had 10,000 resistors images. And then we didn't actually use any experiment tracking or model management. Apart from just dumping the model weights at the top. As a job lib and then tracking in an Excel spreadsheet, like what was what.

**Assistant:**

I see. Given your experience with cloud technologies, how comfortable are you with containerization and managing cloud resources for machine learning workflows?

**User:**

I have containerized a couple of applications before that I've built such as a discord bot to run on Amazon Web Services lambda managing cloud resources is also another key factor and leaning on from this we have to know what sort of virtual machine to use that has enough resources to run our code and then be able to scale it up or down

**Assistant:**

Thank you for your time. We'll be in touch soon regarding the next steps in the application process.