

User:

The project would be much into the whole thing from. Hello.

Assistant:

Hello! Thank you for taking the time to speak with me today about the Entry-Level Machine Learning Engineer position at G-Research. To start off, could you tell me about your experience with machine learning, particularly any projects you've worked on using Python, PyTorch, or NumPy?

User:

Yes, I have first-hand experience working with NumPy for three years. I worked at NVIDIA to develop their fine-tuned LLM BERT model. It was a ground-up approach, creating everything from transformers. And also, we used existing models, that we froze some parts of it and integrated our new model to it.

Assistant:

That's interesting. Could you elaborate on a specific challenge you faced while working on the BERT model at NVIDIA and how you overcame it?

User:

One of the challenges we faced was converting images to text. The text inputs were working correctly, but the images could not be read by the LLM, so we had to develop a separate conversion neural network to get the vectors for the images and feed it directly to the LLM, map it directly to the LLM vector so that it would better understand the image. It's still a work in progress, however we have made good progress on it.

Assistant:

Thank you for sharing that. Given your experience, how would you approach optimizing machine learning models to handle large-scale data, particularly in a financial context like at G-Research?

User:

So I would choose a specific market such as the index market and then take the FTSE 100 and set a cutoff date say 2010 and train an LLM using the LSTM approach on the FTSE 100 using data up to 2010 and then fine tune it to see what kind of prediction results we have and then match it against the actual results and see if I can tune any parameters further such as hyperparameter tuning to see if we can get the predictive set to align with the actual data set.

Assistant:

Thank you for your time today. We appreciate you sharing your experiences and insights. We'll be in touch soon regarding the next steps in the interview process. Have a great day!