

Cover Letter - Machine Learning Engineer

Hi, I'm David Pollack. I'm pursuing a career in machine learning (ML) after finishing my MSc in Economics with a specialization in Quantitative Methods at Humboldt Universität. I am involved in the open source ML community as an outside collaborator (repo access) to the PyTorch audio project, a contributor to the main PyTorch project (I added N-dimensional padding to the library) and a frequent pull-requester to other smaller projects. My master's thesis was exploring musical genre classification of audio clips. I utilized traditional spectrogram-based, attention RNN-based and dilated convolutional-based (WaveNet style) approaches. I am particularly interested in audio ML, but I also have experience with video and images.

During my studies, I worked for a fashion video app startup developing an object recognition system to identify different classes of clothing in user-generated videos and to determine the best frame to crop from the video to showcase these clothing items. I utilized a Mask R-CNN Caffe2-based system, while adding a custom blur detection module to the network. Additionally, I integrated a style transfer network into the video processing pipeline. I dockerized my work product and connected everything to the AWS infrastructure.

I have less experience in NLP, but I am familiar the area. As a personal project, I wrote an implementation of ByteNet, a predecessor to WaveNet.

As for previous work experience, I was a consultant for a long time. I worked on projects primarily in the banking, insurance and construction industry. I don't have many positive nor negative things to say about consulting. I want to bring new ideas to life. That wasn't my experience in consulting.