Cover Letter - Machine Learning Engineer

TL;DR: knows python, deep-learning, PyTorch, audio, video, AWS. Got an MSc. Learning c++ and CUDA. Hab mich ein bisschen deutsch angeeignet.

Hi, I'm David Pollack. I'm a former consultant whose spent the past few years developing skills in deep-learning, programming, and mathematics in order to move onto the machine learning / AI career path.

I am involved in the ML open source community as an author of torchaudio, which is PyTorch's audio sister project. For my contributions, I have been personally invited to the PyTorch Developer Conference 2018. I have also made pull requests to the main PyTorch project, most notably to add N-dimensional padding to the library, and I am frequent pull-requester to other smaller projects. My master's thesis explores musical genre classification of audio clips using traditional spectrogram-based, attention RNN-based and dilated convolutional-based (WaveNet style) architectures. 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. Thus giving me exposure to ETL and cloud-system administration. In the NLP realm, I wrote a PyTorch implementation of Bytenet, a character-to-character NMT network.

In the summer of 2017, I received an MSc in Economics with a specialization in Quantitative Methods from Humboldt Universität.

My current personal summer projects are widing the scope of the torchaudio project to allow for simpler data augmentation with tighter c++ integrating into SoX and learning to write CUDA extensions in PyTorch. As for the future, I am looking to work with a cohesive group of ML engineers to solve the latest problems in audio, video, or NLP.

Lastly, I am a C1-level German speaker, which is something I'm proud of because I did not speak a word of German before arriving in Germany in 2013.