Dear Madam/Sir,

I am thrilled to apply for the Quantitative Machine Learning Engineer in at Company X!

Currently, I am enrolled in a Data Science and Machine Learning 9-month Bootcamp at Springboard. It is quite an intensive program! It is kind of a funny story how I found myself at Springboard, but it all began in 2022 when I was trying to model different securities and economic indicators on excel. Only to find that I hit many different challenges just imagine trying to do many of the things machine learning engineers do in python on Excel. I put that on the back burner and finally came to a realization that I must learn Python Programming and Machine Learning to move in the direction of becoming a quantitative machine learning engineer so I can leverage and further develop these models.

The excel models taught me an invaluable lesson invariably the ease with which we can do analysis with Python and attempting to work through a rather massive dataset on excel where you are agonizing over the details results in a kind of heuristic filtering that enabled a fully integrated and comprehensive understanding of all economic indicators and the resulting behavior of stocks, bonds and commodities. Once I became skilled in Python, SQL, Neural Networks architectures including TensorFlow and Keras to Carry Out Broad Scale Data Analysis and Predictive Modeling I was quickly able to model and predict the Consumer Price Index (CPI) for extended periods years in fact with very low mean squared error and exceptional diagnostic plots for any 6 – 8-year period in the last 70 years. My second sense of these economic indicators gave me an immediate sense of the directions to take to feature engineer them. These programming languages became the means for me to do the kind of analysis I deemed essential to gain precise quantitative insights into financial markets to position me to deliver impactful financial results.

I feel the combination of being able to build advanced time series models combined with an intimate understanding of financial markets and their relation to economic indicators positions me to make a significant contribution to your company and makes we well qualified for the position. My undergraduate degree in Business and Engineering with concentration in finance fits the needs of the position well. From a very young age my father would drill me on the fundamentals of finance, accounting and the importance of earnings and dividends or equivalently share buy backs. That mentality has stuck with me and with that a fused sense of how quantitation plays a major role in things like volatility in the markets for short and intermediate term (e.g. generally 6 – 12 months but up to 18 – 21 months) outlooks with the understanding that in the longer term (e.g. periods of greater than 12 months or in some cases periods greater than 21 months) only fundamentals matter. This is why I consider the 2 year high and low to be far more important than the 1 year high and low.

I am particularly inspired by the present state and history of your company and I was really impressed by the recent interview of your CEO on the state of the economy and what the U.S. can do to increase its competitiveness and reduce its risk such as the risk associated with ballooning debt. I hold a similar outlook and would be honored to be part of such an organization.

Sincerely,

Roger Swartz