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Company Name

Company Address

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Dear Madam or Sir to whom it may concern:

I am applying for the position of [JOB POSITION NAME] in [COMPANY]. I started to analyze data since I enrolled in my Ph.D program in high energy physics and prepared myself to work with data by learning necessary knowledge and skills.

Considering the differences between academia and industry, I took several data analysis and machine learning online courses from DataCamp, Codecademy and Coursera to become familiar with the knowledge and tools commonly used in the industry. I believe these courses can help me to switch from academia to the industry smoothly. The skills such as querying data using SQL, manipulating and cleaning data using Pandas, virtualizing results using Matplotlib and Seaborn, and machine learning using scikit-learn and Keras are in my toolbox now. After finishing capstone projects and receiving certificates from online courses, I participated in the competitions on Kaggle to sharpen my data analysis skills and learn from other experts.

The Ph.D. in high energy physics trained me to be a careful researcher and strengthened my problem solving skills. I have worked in analyzing the data collected by the ATLAS experiment at the European Organization for Nuclear Research (CERN) for the past several years. In high energy physics, we analyze the experimental data and compare the results with the theoretical predictions. In order to analyze the huge amount of data produced by the experiment, I developed an analysis framework using C/C++ and Python. The various analysis methods such as Monte Carlo simulation, event selection and reconstruction, background suppression are mainly implemented by C/C++ and the results are virtualized using Python with the PyRoot package. Finally, the least Chi-square fit and statistical interpretations are applied on the data to extract signals. Because CERN is a huge international organization, I learned how to collaborate with colleagues coming from different countries with different cultures while I lived at CERN.

I would welcome the chance to speak with you about the responsibilities of the [JOB POSITION NAME] position if you think I am a qualified candidate. My resume containing detailed work experience and education is attached. I think my background makes me an unique candidate to fit this challenging position and I would be a valuable addition to your team. I look forward to hearing from you. Thank you for your consideration.

Yours faithfully,

Yu-Ting Shen

Attached: resume