Dear Search Committee,

My name is Junhwan Choi and I would like to apply to a ML Researcher at Red Cell Partners.

I am a data scientist at Walmart Global Technology working on Walmart customer analytics team and Sam’s Club personalization team. At Sam’s Club, I develop next best action recommendation using a response model and a renewal uplift model. I also work on Sam's club membership renewal prediction model explainability. At the Walmart, I develop Machine learning model and data analytics solution to enhance the Walmart business. I build and deploy the W+ membership benefit recommendation system based on customer look a-like approach which combined a large-scale nearest neighbor method and statistical inference. This recommendation is used for CRM/Marketing onboarding campaign. I worked on W+ member churn analysis, which includes churn prediction and causal inference analysis. In addition, I develop a general purposed causal analysis framework and apply to the framework for marketing, CRM, and strategy use cases in Walmart. I also involved proof of concept for Contextual intelligence project by Walmart online purchase basket analysis and Knowledge Graphs. I also worked on PoC to test LLM output with Walmart transaction data for item recommendation engine.  
  
Previously, I worked as a Data Scientist at the SparkCognition (now Avathon), where I focused on building predictive machine learning model with time series data to predict future events. I built predictive ML models using Random Forest, XGBoost, and Artificial Neural Network such as CNN, RNN, Transformer model and Neuroevolution. The future events can also be predicted based on unsupervised approaches (anomaly detection) using one-class SVM, t-sne, and variational autoencoder. For these projects, I mainly utilized python ML libraries such as scipy, pandas, matplotlib, scikit-learn, Tensorflow/Pytorch.  
  
Before the SparkCogniotion, I completed the Data Incubator which is highly competitive data science bootcamp. In the Data Incubator, I got trained in many practical data science tools such as SQL, Machine Learning, Hadoop/Apache Spark, and data visualization.   
  
I received Ph.D. in Astronomy and have completed a few postdoctoral positions as Astronomer. My research focuses on galaxy formation and evolution and astrophysical dynamics. I tried to answer what the fundamental principles are in astronomical phenomena and how these principles are applied to astronomical problems. In these works, I developed the astrophysical models and implemented large numerical simulations. These simulations yield large data that requires big data analyses.

Please let me know if you have any questions regarding my application.

I look forward to speaking with you!

Best Regard

Junhwan Choi