

April 26, 2022

Dear recruiting committee members:

I am excited to learn of the available Data Scientist position at (Amazon) posted on (LinkedIn). With my Ph.D. in computational astrophysics, 10+ years of experience developing numerical algorithms and analyzing big datasets (200TB+), and 550+ hours of training in machine learning in Data Science Bootcamp, I am confident that I will be a valuable asset to your team.

During the intense Data Science career track course, I conducted two independent capstone projects from scratch and two extra challenging projects by interacting with an experienced mentor. I could get an insight into not just machine learning techniques in depth but also various statistical approaches for interpreting the data of interest. While I have 10+ years of experience building numerical models and developing python tools to analyze simulated data, I could reshape my knowledge and skillsets into machine learning and data analysis for industrial topics through the intense course.

In my previous roles, I developed black hole models with numerical simulations in high-performance computing. In this work, the typical data size is >1TB and thus I have acquired efficient methods for analyzing big data in the parallelized system. Using ray-tracing techniques, I also produced synthetic black hole images and conducted statistical analysis to understand the nature of the black hole. Similar to the numerical projects in astrophysics, I believe that most industrial problems involve non-linear multivariable phenomena. Therefore, my expertise in model development and statistical analysis will be useful to find the most profitable solution that (Amazon) needs.

Besides my highly developed machine learning and data analytic abilities, I experienced leading projects with international collaborations. I was a member of the Event Horizon Telescope (EHT) collaboration which consists of 250+ international researchers who have different expertise and background. I learned the communicative skill which is essential to work as a team not an individual.

It would be a great pleasure to learn more about (Amazon)'s plans and provide further insight into how my expertise can help your company achieve these results.

Thank you for your time and for considering my application. I look forward to hearing from you in the near future.

Sincerely,

Doosoo Yoon