

Ray Matsumoto

SCIENTIFIC RESEARCHER · DATA ANALYST

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Environmental Sciences Division

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OAK RIDGE NATIONAL LABORATORY

OAK RIDGE, TN, USA

Job Application for Earth Science Informatics Research Professional

To whom it may concern,

I am an enthusiastic researcher and am writing to express my interest in joining the Environmental Sciences Division at Oak Ridge National Laboratory. I am particularly excited about the work of using data to support projects in Environmental Data Science.

I believe my background would make me a great fit with your division. During my academic training in molecular modeling, I developed a strong foundation in Python and data analysis, regularly developing software to implement statistical methods for understanding simulation data. For instance, I developed an automated workflow to run simulations for over 400 chemical systems, conduct various analysis techniques, and compile the data into CSV format. As part of this project, I leveraged Python, data visualization, and Pandas. My work in this area resulted in 10 peer-reviewed journal articles and 2 conference presentations.

Additionally, I am dedicated to expanding my technical skillset and learning new approaches to efficiently solve problems. As an example, I have learned how to perform SQL-style data extraction tasks in Apache Spark and Pandas on movie ratings and baseball datasets. My understanding is that the above skills would be transferable with the tasks performed in Environmental Data Science.

Data-driven approaches have shown immense promise for enabling discoveries in scientific research. It would be a privilege to support the Environmental Data Science efforts as an Informatics Research Professional.

I appreciate your time and consideration.

Sincerely,

Ray Matsumoto