Christopher Cook

(443) 966-1775
cookchristopher732@gmail.com

Dear Hiring Manager,

I would like to express my interest in working as a Data Chemist with AECOM. I believe my past academic and professional experiences qualify me for this position.

I recently completed a Master of Science degree in Geology at the University of Tennessee, Knoxville. My thesis focused on the development of *ezmmek* (Easy Michaelis-Menten Enzyme Kinetics), an R package that compares extracellular enzyme assay protocols, particularly in how protocol impacts perceived enzymatic activity. *ezmmek* is available on CRAN and GitHub. Please see my GitHub profile at https://github.com/ccook. In addition to package development, I am also familiar with tidyverse, ggplot2, Markdown, shiny, and S3 object-oriented programming (OOP).

Another aspect of my graduate work involved studying novel pathways for the biodegradation of microcystin-LR, a cyanotoxin produced by harmful algal blooms. I used enzyme assays to test the hypothesis that extracellular peptidases can degrade microcystin-LR through broad substrate specificity. Through this work, I have learned the skills of aseptic technique, high performance liquid chromatography, and fluorescence spectroscopy.

At present, I am an Oak Ridge Institute for Science and Education (ORISE) Research Participant with the U.S. Environmental Protection Agency (EPA). I am working on the expansion of a public database of toxicokinetic versus time data. For this project, I designed an R Shiny tool (internal to organization) to check newly submitted data files for format correctness. I am also further developing the R package, *invivoPKfit*, which applies toxicokinetic models to the data contained within this public database. My position with the EPA is a temporary training position, and I look forward to applying these same skills during the next stage of my career.

My experience with R is built on a foundation of chemistry, geology, and microbiology. In the Data Chemist position, I will be able to couple my programming skills with a strong background in the basic sciences.

I believe I am a great candidate for this position with AECOM. I hope to further share my experiences and capabilities during an interview. Thank you for your time and I look forward to hearing from you.

Respectfully,

Christopher Cook