Software engineer

Aerodyne Research, Inc. (ARI), is a small instrumentation and R&D company located in Billerica, MA that has provided state-of-the-art research tools to scientific leaders in the fields of air quality, climate change, and atmospheric chemistry.

Key information

This position is primarily remote work from home. However, the candidate needs to be based in Colorado due to the location and nature of the project. Aerodyne's software team is located in Boulder, CO.

Summary

The successful candidate will be part of a team of scientists and engineers supporting cutting-edge mass spectrometry instrumentation and software for customers and collaborators working to understand and improve air quality around the world. This position involves a blend of responsibilities and is well-suited for the candidate who is enthusiastic about applying their talents in computer science to address timely problems in atmospheric science.

The candidate will work with the data analysis software team to develop, train, and support Aerodyne mass spectrometer users in all their data analysis needs. The analysis software packages for these instruments, called Tofware and Squirrel/Pika, are written in a C/C++ based programming language called Igor (www.wavemetrics.net). The position requires familiarity with Igor or C/C++ for developing, troubleshooting, and documenting the Tofware and Squirrel/Pika packages. The candidate will also be involved in the development of new software tools besides Tofware and Squirrel/Pika that expand existing analysis capabilities. They will also have opportunities to explore the use of new statistical and machine learning methods for analysis and to write analysis software for newly developed instruments. The candidate also needs to be willing to learn specifics of the instruments used and data acquired.

This position does not require the candidate to maintain their own research program, publications, and funding, but they may be expected to participate in (typically remote) data analysis during field work on occasion.

Responsibilities:
- Software development and code support in Igor for Tofware and Squirrel/Pika
- Development of analysis modules (external operations, or XOPs) in C++ to enhance analysis capabilities within Igor
- Development of standalone routines in other languages (e.g. Python, C++, …) to broaden analysis options
- Providing data analysis training to new users

- User support using Zendesk (customer support software) to troubleshoot issues arising during data analysis
- Assistance in organizing annual CIMS and AMS users meetings
- Interact with customers during software trainings, user support, and annual users' meetings, which take place around the world

Minimum Requirements:
- Master's or Bachelor's in computer science
- Software development in Igor or in C/C++
- Ability to travel to corporate office several times a year
- Excellent communication skills
- Demonstrate strong troubleshooting skills

Desired Skills:
- Experience with Igor or C/C++ language
- Mass spectrometry
- Atmospheric or Physical Science
- Python
- Machine Learning
- Statistical data analysis

We offer competitive compensation, comprehensive benefit programs, including an ESOP.

Please submit resume to hr@aerodyne.com.

Aerodyne Research is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability or veteran status, age or any other federally protected class.

Target Salary range for this position is $90,000 to $120,000 annually. Final compensation will be determined on a case-by-case basis and may vary based on the following considerations: skills, experience, education, and/or certifications.