ALANA RISTER

PHONE: 251-610-2154

LOCATION: LINCOLN, NE

EMAIL: ALANALRISTER@GMAIL.COM

LINKEDIN: WWW.LINKEDIN.COM/IN/A-RISTER/

PORTFOLIO: ALANALRISTER.COM

Bioinformatics chemist with mass spectrometry and systems biology experience who enjoys finding the story in big biological data using Python and SQL.

SKILLS & EXPERTISE

- Python (pandas, scikit-learn)
- R programming (tidyverse)
- SQL (BigQuery, Microsoft)
- Metabolomics analysis
- Proteomics analysis
- Data Storytelling
- Pycharm
- Jupyter Notebook
- Statistical Analysis

RELATED WORK EXPERIENCE

Data Interpretation Chemist
NORTH AMERICAN SCIENCE ASSOCIATES, INC., FEBRUARY 2022 - PRESENT (CONTRACT)

- Increased chemical identification rates by 10% by creating a Python API program to perform multiple chemical formula searches in PubChem for non-programming mass spectrometrists
- Decreased project pre-interpretation time by 50% through developing an automated data analysis pipeline.

Postdoctoral Scholar, Toxicology Multi-Omics Analysis
EAST CAROLINA UNIVERSITY, JANUARY 2020 - OCTOBER 2020

- Decreased multiomics analysis time by 20% using R programming and Excel to combine and analyze mass spectrometry proteomics and metabolomics data with transcriptomics data.
- Identified 9 protective proteins from toxins through analysis of systems biology proteomics.
- Illustrated proteomic phenotypes for exposure to vinclozolin through exploratory bioinformatic analysis resulting in additional funding through two grants.

Graduate Research Assistant, Multi-omics Mass Spectrometry Analysis
UNIVERSITY OF NEBRASKA - LINCOLN, JUNE 2016 - DECEMBER 2019

- Decreased data analysis time by 40% by developing mass spectrometry data analysis processes and tools through Python and Excel.
- Decreased data visualization creation time and increased consistency by developing a MATLAB data vizualization program.
- Identified links between maternal diet and fetal lipid metabolism through combined lipidomics, proteomics, and genomics systems biology analysis in collaboration with animal scientists.

EDUCATION

Doctor of Philosophy, Chemistry
UNIVERSITY OF NEBRASKA - LINCOLN, DECEMBER 2019
Minor: Women's and Gender Studies

- Completed 12 projects involving collecting, analyzing, and presenting mass spectrometry datasets to identify action steps to the scientific community and project stakeholders.

Bachelors of Science, Chemistry/Sexuality and Gender Studies
MARY BALDWIN COLLEGE, MAY 2016
Minors: Psychology, Physics, and Leadership Studies

- Designed a survey for senior thesis and analyzed quantitative and qualitative data.
- Led and mentored a group of 15 people in the Virginia Women's Institute for Leadership