MICHAEL J. SIELER JR.

Summary

· Microbiome scientist with 5+ years of experience developing molecular, computational, and statistical research methods

· Research how multiple environmental factors interact with the gut microbiome to influence host health

· Robust data analytic skills in multivariate statistics and machine learning to drive research experiments forward

· Demonstrated abilities to collaborate and take leadership in cross-laboratory experiments

· Experienced in written, oral and visual communication across scientific and public audiences

EDUCATION

2020 | estimated 2025 *

***Ph.D. Microbiology, minor in Biological Data Sciences**
Oregon State University — Corvallis, Oregon

2017 | 2020

B.Sc. Bioresource Research, options in Bioinformatics and Genomics
Oregon State University — Corvallis, Oregon

PROFESSIONAL EXPERIENCE

May 2022 | Present

Owner
MJSieler Consulting — Corvallis, Oregon
Designed, developed, and deployed educational video game software for clients to fulfill grant requirements for communicating scientific research.

Projects: *Virtual Fish.*

Tools Used: *C#, Unity, Python, SQL*

Sep. 2020 | Present

Graduate Research Student
Sharpton Lab (Oregon State University) — Corvallis, Oregon
Investigate how environmental factors (diet, pollutants, pathogens, etc.) interact with the gut microbiome to influence host health using the zebrafish model organism.

Projects: *Impacts of diet & infection, temperature & infection, and chronic antibiotic exposure on gut microbiome. MicrobialBioinformaticsHub*

Tools Used: *R, Python, DADA2, Phyloseq, multivariant statistics, machine learning, Unix/Linux, zebrafish husbandry*

Nov. 2018 | Sep. 2020

Undergraduate Research Student
Sharpton Lab (Oregon State University) — Corvallis, Oregon
Developed novel gnotobiotic microbiome methods using zebrafish.

Projects: *Benzo[a]pyrene effect on zebrafish gut microbiome*

Tools Used: *R, DADA2, Phyloseq, Zebrafish husbandry*

Nov. 2017 | Nov. 2018

Undergraduate Research Student
Mahmud Laboratory (Oregon State University) — Corvallis, Oregon
Assist PhD students and Post-docs with research projects.

Projects: *Discovering novel antibiotics*

Tools Used: *Bacterial culturing, DNA extraction, PCR, Gel Electrophoresis,*

CONTACT INFO

PhD Student
Oregon State University
Corvallis, Oregon
sielerjm [at] oregonstate.edu
MichaelSieler.com
0000-0002-8332-3408
mjsielerjr
sielerjm

SKILLS

Programming: R, Python, C#/Unity, Git, bash/shell, SQL, HTML, CSS, Markdown, C++ and LaTeX
Analysis: Advanced applied statistics, Multivariate linear regression, Machine learning and Model building and selection
Bioinformatics: 16S sequencing, Phyloseq, DADA2, Metagenomics, Mothur, HMMER and FastTree
Lab: zebrafish husbandry, Bacterial culturing, DNA extraction, PCR amplification and Gel electrophoresis
Other: Microsoft Office Suite, Adobe Photoshop and Illustrator and Blender
Language: English, German (C1) and Spanish (A2)

MORE INFO

Publications
Projects

Last updated on 2022-08-08.