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

Ph.D. Microbiology, minor in Biological Data Sciences
2020 — estimated 2025
Oregon State University 📍 Corvallis, Oregon

B.Sc. Bioresource Research, options in Bioinformatics and Genomics
2017 — 2020
Oregon State University 📍 Corvallis, Oregon

💻 PROFESSIONAL EXPERIENCE

Owner
May 2022 — Present
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: C#, Unity, Python, SQL

Graduate Research Student
Sep. 2020 — Present
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. Microbial Bioinformatics Hub

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

Undergraduate Research Student
Nov. 2018 — Sep. 2020
Sharpton Lab (Oregon State University) 📍 Corvallis, Oregon
Developed novel gnotobiotic microbiome methods using zebrafish.

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

Tools: R, DADA2, Phyloseq, Zebrafish husbandry

Undergraduate Research Student
Nov. 2017 — Nov. 2018
Mahmud Laboratory (Oregon State University) 📍 Corvallis, Oregon
Assist PhD students and Post-docs with research projects.

Projects: Discovering novel antibiotics

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

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CONTACT INFO

👤 PhD Student
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🌐 Corvallis, Oregon
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 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