

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 *
- 2017
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2020
- ***Ph.D. Microbiology, minor in Biological Data Sciences**
Oregon State University 📍 Corvallis, Oregon
 - **B.Sc. Bioresource Research, options in Bioinformatics and Genomics**
Oregon State University 📍 Corvallis, Oregon

PROFESSIONAL EXPERIENCE

- May 2022
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Present
- Sep. 2020
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Present
- Nov. 2018
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Sep. 2020
- Nov. 2017
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Nov. 2018
- **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*
 - **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, multivariate statistics, machine learning, Unix/Linux, zebrafish husbandry*
 - **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*
 - **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

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SKILLS

Programming: R, Python, Markdown, C#/Unity, Git, bash/shell, SQL, HTML, CSS, 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.