

MICHAEL J. SIELER JR.

Summary

- Microbiome scientist with 5+ years of experience developing and applying high-throughput 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 gain insights and 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
|
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. 2017
|
Sep. 2020
- **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: 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. Microbial Bioinformatics Hub

Tools: R, Python, Microbial bioinformatics, multivariate statistics, machine learning, Unix/Linux, zebrafish husbandry
 - **Undergraduate Research Student**
Sharpton & Mahmud Labs (Oregon State University) 📍 Corvallis, Oregon
 - Developed novel gnotobiotic microbiome methods using zebrafish. · Assist PhD students and Post-docs with research projects.

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

Tools: R, Microbial bioinformatics, Zebrafish husbandry, molecular wet lab techniques



CONTACT INFO

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SKILLS

Programming: R, Python (OOP, Numpy, SciKit, TensorFlow), C# (Unity), Git, bash/shell, SQL, HTML/CSS, Markdown/LaTeX and C++

Analysis: Hypothesis testing, Big data querying, Advanced applied statistics, Multivariate linear regression, Machine learning and Model building and selection

Bioinformatics: 16S sequencing, Metagenomics and Transcriptomics

Lab: Zebrafish husbandry and Bacterial culturing, extraction and amplification

Other: Microsoft Office Suite and Adobe Suite

Language: English, German (C1) and Spanish (A2)

MORE INFO

- 📖 Publications
- 📁 Projects