Jessica Lumian, PhD

Sacramento, CA | jelumian@ucdavis.edu | www.linkedin.com/in/jessicalumian

7+ Years Bioinformatics Experience	Microbial & Molecular Biology Expertise	Bioinformatics Training & Cross-Functional Teamwork
- Generated five novel Cyanobacteria genomes from metagenomic data - Elucidated environmental stress responses from genome content - Implemented cutting-edge k-mer-based search algorithm for metagenome classification	- 5+ years experience analyzing microbial mat communities with bioinformatics techniques, including 3 dissertation chapters and 1 first author publication - 8+ years benchwork experience isolating and culturing microbes, and shotgun and long read library prep	- Organized 30+ bioinformatics workshops on NGS techniques scripting, and cloud computing - Created Asset Inventory application product according to stakeholder needs using SQL for data organization - Product Owner for NIH Common Fund metadata catalog portal

PROFESSIONAL HIGHLIGHTS

University of California, Davis, Davis, CA   Sept 2016 – Mar 2022 (PhD), Mar 2022 – Present (Postdoc)

Product Owner | Postdoctoral Scholar for NIH Common Fund Data Ecosystem
Product Owner/Software Engineer
- Coordinated product strategy for National Institute of Health Common Fund Data Ecosystem Portal
- Ran Help Desk to troubleshoot internal issues and answer external customer questions

Bioinformatics Training
- Organized and led hackathons and training events about bioinformatics and computational skills (NGS sequence analysis, cloud computing with AWS, UNIX skills) and the CFDE Portal

Research Postdoctoral Scholar at UC Davis Data Intensive Biology Lab
- Pursued cutting-edge bioinformatics research focusing on detection of genomes using large-scale k-mer searching
- Built curriculum and instructed research-focused bioinformatics class using NGS techniques and R

PhD Candidate at UC Davis
- Assessed phylogeny, metabolic potential, and ecology of novel microbial genomes from diverse environments

Bioinformatics Training Coordinator at UC Davis
- Coordinated over 30 bioinformatics workshops, developed instructional materials, and participated in teaching. Topics included NGS workflows, cloud computing, and programming languages

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Governor's Office of Planning and Research, Sacramento, CA   Apr 2021 – Mar 2022

Policy Fellow at the California Initiative to Advance Precision Medicine

- Developed Asset Inventory application product based on feedback from stakeholders: biotechnology companies, community organizations, and governmental policy groups
- Piloted impact assessment initiative team including interviewing stakeholders to determine needs, creating report structure, and delegating tasks

EDUCATION

PhD in Microbiology, University of California, Davis, Davis, CA, 2022

- Awarded a competitive National Science Foundation Graduate Research Fellowship Program fellowship
- 1 first author publication

BS in Biochemistry and Molecular Biology, Michigan State University, East Lansing, MI, 2015

- 10 publications about structural chemistry
- Participated in collaborative programming of khmer bioinformatics software (on author list as Jessica Mizzi)

SKILLS

Technical Skills

- Cloud, Data Analysis and Management: Amazon Web Services, Jupyter Notebooks, NGS data analysis
- Workflow Management and Automation: SnakeMake, Git/GitHub
- Programming Languages: Bash scripting, Python, R
- Communication: Markdown, ReStructured Text, Jira

Organizational Skills

- Project management in cross-functional teams
- Customer-facing communication
- Logistical planning of online and in-person scientific events