Alexander Larsen

5443 Serviceberry, Centreville VA, 20120
PHONE (920) 246-8971
E-MAIL Alarsen525@gmail.com
LINKEDIN www.linkedin.com/in/a-w-larsen

TECHNICAL SKILLS

Multi-purpose Language

- *Python*
- *R*
- *C++*
- *JavaScript*
- *Bash scripting*

Sublanguages

- *SQL*
- *MongoDB*
- *CSS / HTML*

System / Support

- *Git*
- *AWS CLI*
- *REST API*
- *Docker*
- *GIMP img editor*

SUMMARY

Statistical analyst of Next Generation Sequencing (NGS) data as it relates to clinical applications. Excels in both fast-paced environments with urgent clinical results and methodical high dimensional data analysis. Automates multi-language bioinformatic software and tool development with an emphasis on python. Works with business partners and other researchers coordinating projects and public speaking. A self-directed learner, highly collaborative, and excellent at working autonomously.

ACHIEVEMENTS

- Designed automated COVID-19 report end to end software.
- Developed metagenomic analysis library that automatically pulls, graphs, and models metadata.
- Designed automated multi-process Human Microbiome Project Whole Genome Sequencing (WGS) metagenomic pipeline.
- Created rapid primer design tools for over 10,000 different microscopic species.
- Presented on bioinformatics clinical value to congress representative and at other local events.
- Published scientific article with first authorship.

EXPERIENCE

Clinical Bioinformatician II   June 2018 – Current
Aperiomics Inc.   *Sterling, VA*

- Pipeline software development and module creation. Python, SQL, command-line/bash, C++, HTML, CSS, Javascript and R • Quality control and standards development.
- NGS protocols optimization and data analysis. Statistical modeling, Bayesian, Regression, PCoA, diversity. analysis.
- Public speaking, clinician consults, and patient customer service.
- Publication writing, SOP writing, and publication grade image editing.

Undergraduate Researcher   Apr 2013 – May 2016
University of Wisconsin Madison   *Madison, WI*

- Characterizing circadian rhythm genes and their temporal effect on long term memory formation in drosophila. Particular effort towards the quality control of data and samples.
- Characterizing zebrafish embryonic development, crayfish nerve reading frequencies, and rat hippocampal electrical activity.

EDUCATION / CERTIFICATIONS

Bioinformatics Micromasters Certificate   Mar 2019 – Jan 2020
UMGC - edX   *Adelphi, MD*

- Proteins and DNA: Alignment, Statistical Analysis, and Structure. BIF001x - BIF003x

Bioinformatics   June 2017 – Apr 2018
Audited – UW Madison / MIT Open Courseware   *De Pere, WI*

- Graduate studies following UW Madison outlines for a master's in bioinformatics.
- Statistics, bioinformatic algorithms I/II, general algorithms / data structures, artificial intelligence.

B.S. Neurobiology   Sept 2012 – May 2016
University of Wisconsin Madison   *Madison, WI*

- Graduated from a selective honors biology program which facilitated group directed research, scientific writing, and analysis.   – UW Madison Biocore program.