Christopher Rosenthal

Seattle, WA crosenth@gmail.com

EXPERIENCE

Principal Bioinformatics Scientist **2012 - Present**

University of Washington Department of Laboratory Medicine, Seattle, Washington

- Developed bioinformatics software tools and algorithms to parse and analyze large genomic data sets.
- Developed metagenomic molecular microbiology next-gen dna sequencing clinical tests for medical diagnostics.
- Developed, analyzed and curated both bacterial and fungal dna reference sequence data sets for clinical and research assays.
- Authored several methods sections describing bioinformatics algorithms used for research and clinical assays.
- Worked closely with nontechnical doctors and managers to develop bioinformatics specifications for research and clinical projects.

DevOps Software Engineer **2010 - 2012**

The Seattle Times Company, Seattle, Washington

- Responsible for support and scalability of software applications designed for digital technologies.
- Optimized legacy content management code base and server infrastructure to streamline software engineering development and support.
- Successfully worked with journalists and nontechnical stakeholders in development, testing and deployment of software applications.

Graduate Student **2007 - 2009**

Indiana University School of Informatics and Computing, Bloomington, Indiana

- Designed a bioinformatics algorithm to build a coral reef gene ontology constructed from coral reef dna, coral diseases and marine environments all over the world.
- Designed a relational database schema to facilitate the organization of coral reef data.
- Developed a Google Earth visualization layer of the constructed disease ontology.

Software Engineer **2005 - 2007**

Regenstrief Institute, Indianapolis, Indiana

Software Engineer **2003 - 2005**

Indiana University Department of Chemistry, Bloomington, Indiana

EDUCATION

Indiana University, Bloomington, Indiana
M.S., Bioinformatics, 2009
B.S., Computer Science with Honors, 2005
Biology Minor

DIGITAL COMPETENCIES

Languages: Python, Perl, Java, C#/C++/C, Lisp, R, SQL and others
Databases: SQLite, MySQL, PostgreSQL, HSQL, Oracle, MS SQL Server
Platforms: *NIX, Mac, Windows
Productivity Tools: Vim, Git, Python Pandas, Scons, Bash scripting and others
Portfolio: `https://github.com/crosenth`

PUBLICATIONS

[1] *Clinical Next Generation Sequencing Outperforms Standard Microbiological Culture for Characterizing Polymicrobial Samples*, Clinical Chemistry, 2016

[2] *Performance Comparison of Illumina and Ion Torrent Next-Generation Sequencing Platforms for 16S rRNA-Based Bacterial Community Profiling*, Applied Environmental Microbiology, 2014

[3] *Molecular Diagnosis of Actinomadura madurae Infection by 16S rRNA Deep Sequencing*, Journal of Clinical Microbiology, 2013

[4] *Rapid 16S rRNA Next-Generation Sequencing of Polymicrobial Clinical Samples for Diagnosis of Complex Bacterial Infections*, PLoS One, 2013