

# Christopher Rosenthal

Seattle, WA

crosenth@gmail.com

## EXPERIENCE

### Senior Data Science Software Engineer

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 and others

Portfolio: <https://github.com/crosenth>

## PUBLICATIONS

- [1] *Performance Comparison of Illumina and Ion Torrent Next-Generation Sequencing Platforms for 16S rRNA-Based Bacterial Community Profiling*, Applied Environmental Microbiology, 2014
- [2] *Molecular Diagnosis of Actinomyces madurae Infection by 16S rRNA Deep Sequencing*, Journal of Clinical Microbiology, 2013
- [3] *Rapid 16S rRNA Next-Generation Sequencing of Polymicrobial Clinical Samples for Diagnosis of Complex Bacterial Infections*, PLoS One, 2013