

Zachary Dawson

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<https://zachwdawson.github.io/>

Education

Northeastern University, Boston MA

September 2017 - May 2021

Khoury College of Computer Sciences

Candidate for a Bachelor of Science in Computer Science, Minor in Mathematics

Honors: Northeastern Honors Program, Dean's list

GPA: 3.8/4.0

Relevant Coursework: Artificial Intelligence, Machine Learning and Data Mining Software Development, Networks & Distributed Systems, Algorithms & Data, Computer Systems, Object Oriented Design, Linear Algebra, Statistics and Stochastic Processes

Computer Knowledge

Languages: Proficient: Python, Java, Groovy, SQL, bash; Familiar: Scala, Perl

Frameworks/ Technologies: Slurm, GNU parallel, Ruffus, RESTful APIs, Spring Boot, Apache Tomcat, Jenkins, Git, JOOQ, Docker, New Relic, Vivid Cortex, Rapid7, Gatling, Spock, Mockito pandas, NumPy, sklearn

Databases: MySQL, MongoDB

Cloud: AWS

Experience

MIT BioMicro Center Cambridge, MA

January 2020 – June 2020

Bioinformatics Co-op

- Ensured timely data delivery and analysis of new NovaSeq sequencing data, averaging 2-4 terabytes a week.
- Migrated legacy fastq generation and format to industry standard, decreasing fast generation time for NextSeq and NovaSeq flow cells by over 50%.
- Implemented Novaseq and 10X Cellranger pipelines into existing Illumina pipeline, saving biologists days of running and monitoring scripts.
- Maintained and improved web application for sample intake, automating tedious database entry for each new project.

Skillz Inc. San Francisco, CA

January 2019 – June 2019

Server Co-op: Scale/SRE Team

- Led planning and implementation of new internal load testing infrastructure, enabling up to ten times standard production load in staging.
- Deprecated all MongoDB instances and migrated data to MySQL.
- Created weekly company-wide presentations on system health and performance.

Worcester Polytechnic Institute Worcester, MA

June 2016 – August 2016

Lab Assistant/ Programmer

- Collaborated as part of a team to develop algorithms to better model bee decline in field ecosystems.
- Collected field data to prove efficacy of said algorithms.

Interests

Skiing, golf, reading