

BRIAN J. ARNOLD

DATA SCIENTIST | COMPUTATIONAL BIOLOGIST

CONTACT

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SKILLS

Software

Statistics

Machine learning

Bioinformatics

Computing

Data Analytics

Communication

Strategic thinking

EDUCATION

Harvard University

2009-2015

PhD in Biology

University of Minnesota – Twin
Cities

2004-2008

BS in Plant Biology

PROFILE

Highly adaptive computational biologist with 9+ years of professional data-science experience, specializing in machine learning, software (Python and R), and analysis of diverse data modalities. Successfully led projects from conception to completion and significantly improved analytical capabilities of research teams by managing large datasets with scalable solutions. Learns fast, works hard, and navigates uncertainty well.

EXPERIENCE

Biomedical Data Scientist, Princeton University

2020-Present

- Packaged new software to optimize neural networks that segment tissues in spatial transcriptomics data and run at scale.
- Led image segmentation and machine learning analyses of 3D videos to quantify neural activity from animal behavior experiments
- Managed 2 trainees on large scale sequencing projects involving 700+ samples and 10+ TB of data
- Collaborated with 9+ groups, authored papers in Science, Nature Methods (*pending*), Nature Reviews Microbiology, and Genome Biology

Senior Bioinformatician, Harvard University

2018-2020

- Created and published workflow to massively parallelize mutation detection in whole-genome sequences
- Designed machine learning classifier to detect horizontal gene transfer in whole-genome alignments

Postdoctoral Researcher, Harvard School of Public Health

2015-2018

- Designed fast, memory-efficient C++ code to simulate models of bacterial evolution and used Bayesian Optimization to fit these models to data