Christopher J. Fiscus, PhD

Bioinformatics Scientist
Irvine, California

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cjfiscus

Summary

Research scientist with extensive experience in bioinformatics and computational biology, specializing in analysis of next-generation sequencing data using high-performance computing systems. Proven track record of driving scientific research projects as part of a cross-functional team. Expert communicator with ability to translate technical information for diverse stakeholders.

Professional Experience

Postdoctoral Researcher 09/2022 - Present
University of California, Irvine Irvine, CA

- Leading computational biology-based research projects studying wild grape genomics
- Team lead for Pan-Structural Variation Hackathon in the Cloud (hosted by Baylor College of Medicine)
- Organized Southern California Evolutionary Genetics and Genomics Meeting (~100 attendees)

Graduate Student Researcher 09/2016 - 09/2022
University of California, Riverside Riverside, CA

- Led 3 scientific research projects resulting in 3 publications and 8 conference presentations (2 talks, 6 posters)
- Demonstrated leadership and project management skills by individually mentoring 5 direct reports
- Taught discussion sections for 4 college-level courses in genomics and bioinformatics (3X) and genetics (1X)

Quality Control Laboratory Technician 12/2015 - 08/2016
Charles Krug Winery St. Helena, CA

- Performed enology laboratory tests throughout production to ensure legal compliance and quality standards
- Developed 5 SOPs for quality control laboratory assays
- Identified, troubleshot, and addressed product quality issues in collaboration with production team

Harvest Laboratory Technician 08/2015 - 12/2015
Charles Krug Winery (via Apex Life Sciences) St. Helena, CA

- Conducted enology laboratory analyses and sensory evaluations supporting all stages of the winemaking process
- Maintained strict adherence to SOPs and contributed to quality assurance initiatives
- Managed sample collection, bench trials, and blending experiments to optimize product characteristics

Skills

- **General** - data analysis & visualization, problem-solving, statistics, statistical programming
- **Programming** - R, bash, python
- **Bioinformatics** - NGS data analysis, SNP calling, GWAS, bwa, GATK, samtools/bcftools, bedtools, plink
- **Computing** - Unix command line, SLURM (HPC), conda, git (version control), snakemake (workflow)

Education

Ph.D. Genetics, Genomics and Bioinformatics 2022
University of California, Riverside

B.S. Biotechnology 2015
University of California, Davis

Certifications

AWS Cloud Technical Essentials 11/2023
Coursera

Publications 0000-0001-9569-1809

Landis JB, Guercio AM, Brown KE, **Fiscus CJ**, Morrell PL, Koenig D. Natural selection drives emergent genetic homogeneity in a century-scale experiment with barley. Science. 2024;385: eadl0038. doi:10.1126/science.adl0038

Deb SK, Kalra D, Kubica J, Stricker E, Truong VQ, Zeng Q, **Fiscus CJ**, [41 authors], Sedlazeck FJ, Busby B. The fifth international hackathon for developing computational cloud-based tools and resources for pan-structural variation and genomics. F1000Res. 2024;13: 708. doi:10.12688/f1000research.148237.1

Fiscus CJ, Herniter IA, Tchamba M, Paliwal R, Muñoz-Amatriaín M, Roberts PA, Abberton M, Alaba O, Close TJ, Oyatomi O, Koenig D. The pattern of genetic variability in a core collection of 2,021 cowpea accessions. G3. 2024. doi:10.1093/g3journal/jkae071

Martinez SE, Conn CE, Guercio AM, Sepulveda C, **Fiscus CJ**, Koenig D, Shabek N, Nelson DC. A KARRIKIN INSENSITIVE2 paralog in lettuce mediates highly sensitive germination responses to karrikinolide. Plant Physiol. 2022. doi:10.1093/plphys/kiac328