

Brenton Graham

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EXPERIENCE

University of Colorado Anschutz, Department of Biostatistics & Informatics

Graduate Research Assistant

Sep 2021 – Present

- Exploratory data analysis, cleaning, visualization and modeling of 'omics data (microbiome, proteomics, metagenomics)
- Use of both statistical (linear regression, logistic regression) and machine learning (random forest, clustering) models
- Provide statistical analysis support to cystic fibrosis and rheumatoid arthritis domain experts

Twist Bioscience – San Francisco, CA

Research Associate II, R&D

Nov 2020 – Sep 2021

Research Associate, R&D

Jul 2019 – Nov 2020

- R&D group focused on developing new applications for Twist Bioscience's NGS target enrichment product line
- Used bioinformatic tools and pipelines to process raw sequencing data
- Prepared data visualizations using Python (Matplotlib, Seaborn) and R (ggplot2)
- Developed novel bioinformatic Python packages used to analyze and improve NGS target enrichment products
- Authored and presented posters at multiple biomedical and genomics conferences
 - American Association of Cancer Research Conference (AACR) 2021; First author [[Methylation Abstract Link](#)]
 - American Society of Human Genetics Conference (ASHG) 2020; [[Methylation Poster Link](#), [Viral Detection Poster Link](#)]

Manufacturing Supervisor

Jan 2019 – Jul 2019

- Managed the production floor in a fast-paced and highly automated environment focused on manufacturing synthetic DNA
- Made decisions regarding production priorities, troubleshooting and scheduling for the group
- Successfully implemented improvements to the manufacturing team's NGS library preparation assay

Manufacturing Associate

Aug 2018 – Jan 2019

- Performed wet-lab molecular biology techniques including NGS (Illumina), PCR, DNA purification, and DNA quantification
- Operated robotic liquid handlers, fluorometers, and bioanalyzers

Q² Solutions – San Juan Capistrano, CA

Laboratory Associate, Vaccines

Oct 2017 – Aug 2018

- Performed cell-based immunoassay (microneutralization assay) for clinical research of Dengue virus vaccine
- Maintained Vero cell lines using mammalian cell culture techniques including seeding and passage
- Developed VBA scripts to significantly improve in-house tracking of patient samples, virus, controls and cell banks

EDUCATION

M.S. in Biostatistics – University of Colorado Anschutz Medical Campus

Expected Graduation: May 2023

- Minor in Data Science; GPA: 3.89/4.00

B.S. in Biochemistry – Santa Clara University

Jun 2017

SKILLS

- **Programming Languages:** Python, R, VBA
- **Software:** Git, Docker, Databricks, Tableau, Microsoft Excel
- **Bioinformatic Tools:** FastQC, Cutadapt, BWA, Bowtie2, BWA-Meth, Bismark Bisulfite Read Mapper, SAMtools, Picard Tools, GATK, Bedtools, IGV, Seven Bridges, Jellyfish (k-mer counting)