

Dear Hiring Manager,

I would like to introduce myself as an applicant for the Bioinformatics Scientist position at your Emeryville location. I am confident that my technical expertise in population biology and research computing will help you develop products that drive new discoveries and enrich people's lives.

My graduate work in population biology at UNC Chapel Hill taught me how to analyze large genomic data sets and apply advanced statistical methods to investigate the genetic basis of complex traits. My research combined population genetics, genome-wide association mapping, and gene expression analyses to discover alleles that contribute to adaptive differences in craniofacial morphology between young species of *Cyprinodon* fishes. For my postdoctoral research at UC Davis, I am applying temporal contrasts and demographic inference across hundreds of Pacific herring genomes to reveal genetic variation contributing to disease risk and population collapse.

All of my research questions are tied together by a curiosity about genetic changes that make populations unique. Pursuing these questions has involved analyses of large sequencing data sets which has made me passionate about learning, developing, and applying new bioinformatics approaches. I have over five years of experience working in cloud-based Linux environments with industry standard software for genomic analyses and data visualization. I am highly organized and comfortable programming in R, Python, and Bash.

Throughout my academic career, I have had rewarding experiences sharing my discoveries at conferences, collaborating in lab groups with diverse research interests, and participating in science outreach where I could share my enthusiasm for evolutionary biology with larger audiences of nonscientists. I have developed a passion for communicating technical aspects of population genetics among experts and laymen.

My motivation to pursue a career in biology began with an interest in human evolution. I am eager to apply the computational skills I have acquired researching non-model organisms to help answer human-centered questions. I am also excited by the opportunity to learn about cutting edge sequencing technologies and develop pipelines for genomic data. Thermo Fisher will benefit from my ability to communicate and collaborate across disciplines, my adaptability, and my deadline-oriented mindset. I enjoy solving intellectually challenging problems and working with a team toward a common goal.

Thank you for taking the time to review my application. If you have any further questions regarding my experience or qualifications, please contact me at any time. I look forward to hearing more about Thermo Fisher and learning what I can bring to your team!

Sincerely,
Joseph McGirr, PhD