

In my next Role I'm hoping to combine my extensive experience as molecular biologist in drug discovery along with my knowledge, interest and excitement to use computational tools.

I have conducted research on several disease states and their biological underpinnings. This involved attention to detail, trouble shooting and good communication skills. In support of my Assay Development efforts at Amgen and Caraway, I used scripting languages to read manipulate and visualize High dimensional data in an automated way. This allowed for the advancement of projects by developing and producing data at a rapid pace.

Since the downturn in the biotech industry, I have been keeping abreast of new technologies thru online learning. The following slides have summarized that experience. As with my previous employment, I would bring a can-do attitude to your organization and look forward to leveraging these skills to achieve your departmental goals. Thank you for your time and attention.

Sincerely

**Jabbar Campbell** 

### NGS

Certification	Area	Topics	Tools
✓	Next Generation Sequencing	ExtractionQCRNA/CDNAlibrary prep—end repair Amplification types (Emulsion vs Bridge) Platforms (Seq by ligation, Ion torrent semiconductor, Illumina Reversible terminator) Variant analysis(indel SNPS)	NGS Overview
✓	<u>Functional Genomics (Microarray to RNA-Seq) Data</u> <u>Analysis</u>	Raw readQCTrimming—alignment—reporting Microarray analysis	NCBI, Linux, E-util, SRA tools (fastqc, bowtie, samtools, htseq) GEO2R
✓	Case Studies in Functional Genomics   edX	Raw readQCTrimming—alignment—reporting Poisson and negative Binomial distributions Epigentics/ Methylation (illumina 450, Bisulfate, CHIP- seq)	Linux, TCGA, GEO Bioconductor (Star, Deseq, Limma, Minifi, Bumphunter)
in progress	Genomics in the Cloud	HPC, Google Cloud, Virtual machines, mounting buckets, Containerization, Variant calling (*.vcf), reference mode (*.qvcf), BSQR, VQSR, joint vs single sample calling, Pipelines for  Germline vs Somatic Variants, Copy Number Variants	Gsutil, docker, gatk, spark, IGV
NA	<u>Getting started — Nextflow 23.10.0 documentation</u>	Raw readQCTrimming—alignmentreporting	NEXTFLOW(~BASH)
NA	NEXTFLOW summit	Building a pipeline, containerization	Nextflow, nf-core
NA	Nextgenerationsequencinghq.com	Raw readQCTrimming—alignmentreporting	SRA, FastQC, EA-utils, MIXCR R(immunoarach)

### **Data Science**

Certification	Course	Topics	Tools
$\checkmark$	Udemy Course The Git & Github Bootcamp		GitBash
$\checkmark$	Udemy Course Bash Scripting and Shell Programming (Linux Command Line)		BASH
$\checkmark$	Course: Data Engineering for Beginners with Python and SQL   Udemy	Python, SQL, API's	VsCode, Python review, SQL (postgres, sql-shell) APACHE(KAFKA,PULSAR,AWS-KINESIS) Postman(API)
$\checkmark$	Git Lab Cl: CI/CD and Devops for Beginners   Udemy	Web/cloud deployment, yaml pipelines in gitlab, containerization, AWS, beanstalk, java, Unit testing	YAML, json, surge.sh, Gatsby, node,js, postman, gradle, newman
✓	Python Programming GUI, Database and System Design   Udemy	Common data types, case logic, looping, functions, class objects, inheritance, GUI interfaces, System Design	Python, Tkinter, Primordious, SQLlite

# **Machine Learning**

Certification	Course	Topics	Tools
✓	Introduction to vector databases using Milvus   Udemy	Milvus (Vector Databases), PyMilvus commands, retrieve and generate vector embeddings on raw image or text data for similarity searches.	Pymilvus, tensorflow, Pytorch, API
$\checkmark$	HarvardX Data Science and Machine Learning	BAYESIAN Statistics, Prediction Regression LOWESS, cross validation, KNN models, Monte Carlo simulations & Bootstrapping Linear discriminant Analysis Matrix Decomposition(SVD)	R (caret)
$\checkmark$	Pytorch Basis for Machine learning   edX	Tensors derivatives linear and logistic regression	Pytorch
$\checkmark$	Deep Learning Fundamentals with Keras	Neural Network architecture, input functions, Node Activation functions, convolution networks, recurrent networks, Deep learning autoencoders	Keras, Pytorch, Tensorflow

## **Project Experience by Company**

Company	Area	Project	Tools
Academia	Neuroscience	DNA cloning, genotyping	NCBI Blasts, PCR oligos
Amgen	Neuroscience	High Content Imaging, Histology	Gene data Screener
		HTS- electrophysiology	R
		HTS - FRET	R, Python, SHINY
Caraway	Biomarker Discovery	HTS-High Content Imaging and ELISA	R, Python (seaborn) SHINY
		RNA-Seq	R, Bioconductor, (GEO2R, QUASR, DESEQ2,) AWS
		Mass Spec	R, Bioconductor (ViseoGO)
		Lipidomic	R, Bioconductor (indeed)
		3d Organoid Cyst Swelling	R (EBImage)

### **Community and Events**









