

Abhilash Dhal

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EXPERIENCE	Data Scientist Jan' 2020 - Present Bioinformatics/Data Science <ul style="list-style-type: none">• Drove \$10M in revenue through business partnerships for biomedical projects involving complex diseases, vaccine design and cancer drug response therapy.• Co-developed standardized QC metrics for NGS pipeline, led system-wide analysis to identify duplicate samples and corrupted samples saving over 20 hours of manual effort per month.• Led strategic efforts cross-functionally to conduct fundamental methods research, investigate machine learning models and develop internal dashboards for improving custom bioinformatics analyses. Data engineering/Software development <ul style="list-style-type: none">• Led strategic efforts for optimization of data inventory (via migration from Bigtable to BigQuery), leading to cost savings of over \$180K annually.• Co-Developed and maintained automation pipelines for most commonly used analyses using nextflow, leading to 50% faster turnaround of projects.	Serimmune Goleta
EDUCATION	University of California, Davis, CA <i>Master of Science, Biophysics,</i> (Deep learning, Population and Quant. Genetics, Comp. Drug Design, Algorithm Design) • Thesis Project: Developed, applied and evaluated bayesian regression models for GWAS and Genomic prediction. Indian Institute of Technology, Varanasi, India <i>Master of Technology, Biochemical Engineering,</i> • Junior research fellow(JRF)(top 0.01%) in the Graduate aptitude test examination(GATE) Indian Institute of Technology, Varanasi, India <i>Bachelor of Technology, Biochemical Engineering,</i> • secured (top 0.1%) of 450,000 students in the Joint Entrance Exam(JEE)	Dec' 2019 (Github) Aug' 2016 Aug' 2015
PROJECTS	Bio-marker discovery: • Identification of significantly enriched/expressed biomarkers using parametric and non-parametric outlier sum based algorithms. Characterization of complex disease: • Applied different dimensionality reduction (UMAP) in conjunction with HDbScan to identify clustering structures of biological significance (Tumor type and Cancer subtype) for bulk RNA-Seq data.	(Github) (Github)
MISC	Patent: SARS-CoV-2 SERUM ANTIBODY PROFILING Co-Authored Publications: <ul style="list-style-type: none">• Distinguishing features of long COVID identified through immune profiling Nature (2023)• Utilizing the autoantibody immune response to tumor antigens for kidney cancer early detection Journal of Clinical Oncology(2022)• High-resolution epitope mapping and characterization of SARS-CoV-2 antibodies in subjects with COVID-19 Commun Biol (2021) Programming Languages: Python, Julia, Java, bash, R, MySQL Frameworks and Tools: Keras, Scikit-learn, streamlit, shinyR, BigQuery, Bigtable, nextflow	PCT/US2021/038960