Shraddha Piparia

Computational Biologist, Richland, WA | +1-940-297-9424 | spiparia@health.ucsd.edu

Professional Experience

Postdoctoral Research Associate | 2021-Present | University of California, San Diego

- Conducted research on asthma pharmacogenetics and computational epidemiology, integrating genomic sequencing data with clinical phenotypes
- Developed statistical models and machine learning pipelines to identify genetic determinants in respiratory diseases
- Collaborated with multidisciplinary teams in a remote setting, contributing to high-impact publications

Application Developer | 2013-2016 | Oracle India Private Limited | Telangana, India

- Developed enterprise-level applications and ML-based sentiment analysis tools
- Enhanced software testing processes through automated test case generation

Technical Skills

Programming: R, Python, C, SQL, MySQL, PostgreSQL, git/GitHub, docker, AWS

ML Framework: scikit-learn, spark, TensorFlow/Keras, MXNet, pandas, NumPy

AWS: Apache spark, EMR, SageMaker

Bioinformatics & ML: PLINK, VCFtools, TF-IDF, NLP, One hot encoding, Principle Component Analysis, dataset assembly, exploratory analysis, data QC, disease modeling, Naive Bayes, regression models, automated workflows, high-throughput processing, endotypes, k-means/hierarchical clustering, ANOVA

Genomics & Statistical Genetics: GWAS, rare variant analysis, statistical fine-mapping, genotype pattern mining, linkage disequilibrium, polygenic risk scores, functional annotation, genotype QC, pleiotropy analysis, Mendelian randomization

Statistical Analysis: Regression (linear/mixed models), multivariate analysis, gene-environment interactions, power estimation, longitudinal/survival analysis (Cox, Kaplan-Meier), epidemiological study design

Specialized Knowledge: pharmacogenetics and computational epidemiology

Education

PhD in Computer Science | University of North Texas | 2016-2021

MTech, Software Engineering | NIT Rourkela | 2011-2013

B.E., Computer Science | CSVTU | 2007-2011

Selected Publications

1. Piparia, S. et al. Enhancing Asthma Pharmacogenetics Through Subtype-Specific Associations. CEA, 2025
2. Piparia, S. et al. Using machine learning to improve our understanding of COVID-19 infection in children. PLoS ONE, 2023
3. Piparia, S. et al. MicroRNA-584-5p as a Key Modulator of Inhaled Corticosteroid Resistance in Asthma. *In Progress*