

Khushbu Patel

Bioinformatics Scientist I

A bioinformatics scientist, in the field over three years with comprehensive background in computational cancer genomics and transcriptomic data. Competent working in Linux and HPC computing environments. Skilled in developing and implementing computational methods and workflow to analyze high throughput genomic data. Strong background in cancer genomics, cancer biology, genetics and molecular biology.



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SKILLS

Statistics

genomics

machine learning

cancer genomics

transcriptomics

RNA-Seq

NGS

PROGRAMMING LANGUAGES

R



Bash



Python



Perl



WORK EXPERIENCE

Bioinformatics Scientist I

The Children's Hospital of Philadelphia

07/2018 – Present

Philadelphia, PA

Achievements/Tasks

- Experience analyzing genomic (WGS, WES) and transcriptomic (RNA-Seq, ChIP-Seq) data.
- Proficient coding skills in R and bash to wrangle, analyze and visualize data.
- Parallelization of jobs over HPC to run routine pipelines for large number of samples.
- Containerizing pipelines for efficient reproducibility of pipelines.
- Sound knowledge of statistical concepts and implementation of statistical tests for hypothesis testing.
- Ability to effectively communicate results in the form of reports/spreadsheets/visualizations.

Bioinformatics Fellow

Centers for Disease Control and Prevention

02/2018 – 07/2018

Atlanta GA

Achievements/Tasks

- Performed routine high quality SNP analysis on the sequences submitted to PulseNet from laboratories in all 50 states as well as several local public health labs and federal agencies (USDA and FDA).
- Performed hierarchical clustering of hqSNPs to distinguish between related strains and unrelated isolates in a food borne outbreak investigation.
- Implemented routine quality control checks at various checkpoints and contributed scripts to the existing bioinformatics pipeline with additional metrics to be included in the next version of the pipeline.
- Developed scripts in python and perl to troubleshoot inconsistent sequencing data submitted by the labs from various labs across the country.
- Performed contamination determination across samples using Kraken.

EDUCATION

Master of Science (Bioinformatics)

Georgia Institute of Technology

08/2016 – 12/2017

Atlanta, GA

Master of Science (Bioinformatics)

University of Mumbai

06/2014 – 04/2016

Mumbai, India

Bachelor of science (Microbiology)

University of Mumbai

06/2011 – 04/2014

Mumbai, India