Genomics

The study of genes is the approach that enables us to predict, diagnose, analyze and treat different diseases with utmost precision and personalization.

Precision Oncology Platform

- An approach that looks at the gene mutations in cancer cells to diagnose personalized treatment plans.
- Molecular profiling of tumors to identify targetable alterations.
- Rapidly developing and has entered the mainstream of clinical practice.
- This can help clinicians make better and informed decisions about which medicines and therapies are best for each patient.

Our Solutions

We have developed a framework for precision oncology.

In this, we utilize a sequenced genome as input and obtain two output reports.

A primary report which consist of the summary and some other details of the analysis including some predictions

Secondary report which is elaborated and consists of numerous results that have been obtained from the analysis such as base changes, codon changes, amino acid changes, variant frequency with its effects and impacts, affected biomarkers, etc.

Applications

Research & Development	**Diagnosis & Prognosis**	**Personalized treatment**
In-depth Variant analysis	**Biomarker analysis & Druggability**	**Side effect analysis**

Impacts and Value Proposition

This platform will help cancer patients globally by providing early diagnosis and precise predictions.

Our clients can utilize these predictions and analysis to obtain precise treatments for their patients..

This can be utilized well for R&D wherever the DNA analysis is required.

Our solution will help the clients to achieve their goals, which may differ, in lesser time and efficiently.

Bio-sensors
(Through Phylogenic Travel)

Need

To find unique sequences in the genome researchers are doing pairwise comparison of all the available genomes which is computationally not feasible.

Solution

We have developed a biologically inspired model to find the candidate DNA fragment for micro-organism diagnosis by travelling through phylogeny of life. Finding species and strain specific target DNA require searching all the combination of KMERs present in the genome.

Scope

These cloud-based approaches will help to expedite the diagnosis and might be a further step towards the future of microbial diagnostics.

The theory behind the cloud-based platform can be applied to design universal diagnosis probes, which can identify known and novel species/strain with high phylogenetic power

Applications

| Pathogen discovery | Drug discovery | Toxin detection | Disease prediction |