

Our Services

ArrayGen offers an expanded selection of custom services and solutions in Genomics Bioinformatics. We assess and evaluate the customer requirement and select the most appropriate protocol and tools to achieve the desired result in the shortest possible time. Our focus is on improving working algorithms for their Processing Times, Accuracy, Sensitivity, and Specificity through Genomics Bioinformatics.



Our Services

Genomics & Bioinformatics **1**

Custom Data Analysis **2**

Training/Workshop/Internship **3**

Trends & New Software **4**

Company Overview

ArrayGen is a global bioinformatics company, founded by Mr. Rajesh Mahato in June 2014. ArrayGen specializes in Genomics data analysis and developing custom bioinformatics tools. We constantly strive to develop new solutions, and plug the existing gaps in the technological advancement of the field. Our novel Array Design Approach Strategy (ADAS) aims to condense the time lag between demands of scientific community and manufacture industry, and expedite research with the help of latest technologies.

List of Services:

- Array Design Services
- Clinical Genomics Services
- Microarray Data Analysis
- AgriGenomics Services
- Bioinformatics Services
- NGS Data Analysis
- Sequencing Services
- BICP Program
- Workshop / Training
- **Wet Lab Services**

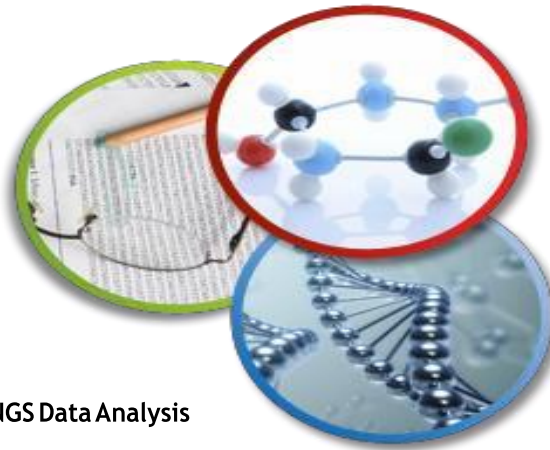
Sequencing Services-ArrayGen provides reliable, high quality Sequencing services to researchers at academic, pharmaceutical, biotechnology, and private & government institutions. ArrayGen is providing Industry-leading customer service, high-quality results, many extra add-ons, stringent quality control, **Custom Data Analysis** till publication and quick turnaround times at competitive prices make ArrayGen the partner of choice for researchers worldwide.

ArrayGen provides an array of NGS Data Analysis services from different sequencing platform (illumina, 454, SOLID, Ion-Torrent, PacBio, Nanopores etc) including

1. De novo genome and transcriptome assembly
2. Genome alignment and analysis
3. Chip-Seq Analysis
4. Methylome-Seq Analysis
5. Reference Based RNA-Seq Analysis
6. De-novo Based RNA-Seq Analysis
7. MicroRNA-Seq Analysis
8. Targeted re-sequencing (Exome-Seq) Analysis
9. DNA-Seq (Genome variant Detection) Analysis
10. Mapping, Annotation and Comparative Genomics Analysis (CGA)
11. 16S/28S/ITS rRNA Metagenomic Analysis
12. Met transcriptome Analysis

Project Success Story Feedback

ArrayGen are a very professional and committed organisation. They are meticulous, organized and responsive. They pay attention to details right from the beginning to the end of their analysis. My experience with the quality of their work has been highly satisfactory and superb. True to their company's catchphrase, they give precision to the last nucleotide. The process of getting my concerns resolved has been personable and work done has been top notch. The overall performance of the crew has been exceptional. It was a pleasure to have worked with this company, most especially Rajesh. I am thrilled and I cannot wait to recommend them to others in Nigeria. I will definitely work with them again and again...



NGS Data Analysis

ArrayGen offers a range of Next Generation Sequencing (NGS) data analysis for disease association studies, cancer genomics, personalized medicine, agriculture biotechnology and life sciences to help researchers derive meaningful conclusions from their data. ArrayGen provides an array of NGS Data Analysis services from illumina, 454, SOLID, Ion-Torrent & PacBio including

- De novo genome and transcriptome assembly
- Genome alignment and analysis
- Chip-Seq Analysis
- Methylome-Seq Analysis
- RNA-Seq Analysis
- MicroRNA-Seq Analysis
- Targeted re-sequencing (Exome-Seq) Analysis
- DNA-Seq (Genome variant Detection) Analysis
- Mapping, Annotation and Comparative Genomics Analysis (CGA)
- Metagenomics Analysis

Custom Array Designing

ArrayGen offers an expanded selection of custom services and solutions in Microarray Chip Design made to your specifications. We assess and evaluate the customer requirement for Microarray Chip Design and select the most appropriate protocol and tools to achieve the desired result in the shortest possible time.

- Gene Expression
- MicroRNA
- Pan-genome
- Alternative splicing
- Chip-on-chip
- DNA Methylation
- aCGH / CNV
- SNP / Target Capture

Our Services

ArrayGen offers an expanded selection of custom services and solutions in Genomics Bioinformatics. We assess and evaluate the customer requirement and select the most appropriate protocol and tools to achieve the desired result in the shortest possible time. Our focus is on **improving algorithms** for their Processing Times, Accuracy, Sensitivity, and Specificity through Genomics Bioinformatics. We have collaboration with other Labs/ Company for **wet Lab services**.

Microarray Data Analysis

ArrayGen offers a range of microarray data analysis solutions ranging from quality control, differential expression, enriched peak detection, methylated regions, insertion / deletion and SNP calls to help researchers derive meaningful conclusions from their data.

- Gene Expression Profiling Analysis
- miRNA Analysis
- Chip-on-Chip Analysis
- DNA Methylation Analysis
- aCGH / CNV Analysis
- SNP Analysis
- Custom Arrays for NGS Data validation

Clinical Genomics

ArrayGen's target capture array products are ideal for clients' clinical genomics R&D, and can be used by researchers worldwide to predict, validate, and screen genomic variations of their interest. ArrayGen provides custom target capture arrays for various human diseases including.

1. Homo sapiens (Human) 1x1M Whole Exome
2. Capture Array
3. Homo sapiens (Human) ChrX 1x244k Exome Capture Array
4. Homo sapiens (Human) ChrY 1x244k Exome
5. Capture Array
6. Human Autism Spectrum Disorders 1x244k Exome Capture Array
7. Human Ciliopathies 1x244k Exome Capture Array
8. Human Colon cancer 1x244k Exome Capture Array
9. Human Epilepsy 1x244k Exome Capture Array
10. Human Leukaemia 1x244k Exome Capture Array
11. Human Lung Cancer 1x244k Exome Capture Array
12. Human Cancer Comprehensive 1x1M Exome Capture Array
13. Human Neuromuscular Disorders 1x244k Exome Capture Array
14. Human X-Linked Intellectual Disability

Our Training is one
to one interactive
and industrial
standards



Training/Internship/Workshop

Bioinformatics Services

ArrayGen's core strength is our own cutting-edge algorithms, protocols, and data analysis expertise in the entire genomics range for Bioinformatics. Keeping in trend with the growth and demands of the Bioinformatics services industry, ArrayGen provides customizable, accurate, sensitive and specific solutions to the following areas of researchers' interests:

- Functional Gene Annotations / Genome Annotation
- Gene / Orf Prediction
- Gene Ontology and Pathway Enrichment Analysis
- Genome alignment and Analysis
- Motif Prediction
- Multiple sequence alignment
- BLAST / BLAT Data Analysis
- Comparative Genomics
- Phylogenetic Analysis
- Custom array designing for any application, any organism, any sequence
- Targeted resequencing baits for custom Disease gene panels
- Microarray Data Analysis

AgriGenomics

ArrayGen's genotyping array products are ideal for clients' AgriGenomics R&D, and can be used by researchers worldwide to predict, validate, and screen genomic traits of their interest. ArrayGen provides custom genotyping arrays for various plant species including

1. Arabidopsis SNP Genotyping 1x1M SNP Array

Short Term Bioinformatics Training

Short Term Bioinformatic training includes:

Module - I Advanced Bioinformatics & basic programming

Module - II Microarray Data Analysis

Module - III Next Generation Sequencing Data Analysis

(Choose any one application)

15 Days & 30 Days Training Modules Below:

One Month Training Program – Module I, II, III

15 Days Training Program – Module I and II or Module I and III

For Fees Details Please mail on Info@arraygen.com

Life Sciences Training

We are keen to impart the expertise in genome-informatics through workshops and training programs. Each workshop includes both lectures and hands-on sessions. The workshops and training programs will be held in Nepal or candidates can visit ArrayGen technologies, Pune for offline training

Training Starting Date:

Our training is one to one and training can also be started anytime and any date as per the candidate convenience.

** Weekend Batches are also available as per the request





Online & Offline Training

ArrayGen offers the following genomics and bioinformatics training courses with a focus on improving participants' practical applications, by using the appropriate theoretical knowledge.

Short Term Bioinformatics Training Program Content

Module - I	Advanced Bioinformatics & basic programming
Topics	<ul style="list-style-type: none"> - Introduction to Bioinformatics - Understanding Genomics Bioinformatics - Databases & tools (NCBI, UCSC, BLAST, BLAT etc) - Gene Prediction - Genome Annotation - Biological Functional Annotation - Genome Visualization - Basic Perl / Python programming - Unix based commands
Module - II	Microarray (Gene Expression Profiling) Data Analysis
Topics	<ul style="list-style-type: none"> - Microarray techniques detailed understanding - Microarray chip designing - Gene expression data analysis using R - Quality control & Normalization - Differential Expressed Genes (UpRegulated & DownRegulated) - Pathway & Gene Ontology Enrichment Analysis - Different plots (Heatmap, volcano plot etc) R
Module - III	Next Generation Sequencing (NGS) (Choose Any One Application)
	-RNA-Seq, DNA-Seq, CHIP-Seq, miRNA, Metagenomics, Methyl Seq, Whole Genome Denovo Assembly & scRNA Seq
Topics	<ul style="list-style-type: none"> - Overview of NGS & detailed understanding - Data Retrieval (NCBI SRA) & Introduction to data types - Read Quality Check (FastQC & Cutadapt) - Alignment of reads using reference Genome (Tophat) - Visualization of mapped reads (UCSC / IGV / ArrayGen Genome Browser) - Gene Expression Quantification (Coverage, FPKM) - Differential expression analysis (Cufflink, cuffmerge & cuffdiff) - Different plots (Heatmap, volcano plot etc) using CummeRbund - Pathway & Gene ontology enrichment analysis - Pathway Network Analysis

For more content and syllabus for different Applications Please visit - <https://www.arraygen.com/online-ngs-courses.php>

Short Term Bioinformatics Training Program Content

Module - III	II. DNA-Seq Data Analysis
Topics	<ul style="list-style-type: none">- Overview of NGS- Data Retrieval (NCBI SRA) & Introduction to data types- Read Quality Check (FastQC & Cutadapt)- Alignment of reads using reference Genome (BWA/Bowtie)- Understanding Mapping Output (SAM/BAM, Samtools & Bedtools)- Variant detection using GATK & Samtools- Visualization of variation with IGV- Complete annotation and variant effect prediction (SNPEff, SNPDB etc)- Predict the effects of coding non-synonymous variants on protein function using the SIFT algorithm
Module - III	III. RNA-Seq (Denovo Based) Data Analysis
Topics	<ul style="list-style-type: none">- Overview of NGS & detailed understanding- Data Retrieval (NCBI SRA) & Data types- Read Quality Check (FastQC & Cutadapt)- Read Transcriptome Assembly (Trinity)- Visualization of mapped reads on Assembled Transcriptome (UCSC & IGV)- Gene Expression Quantification (Coverage, FPKM)- Differential expression analysis (EdgeR / DESeq2)- Pathway & Gene ontology enrichment analysis- Pathway Network Analysis- Basics on R programming- Different plots (Heatmap, volcano plot etc) using R
Module - III	IV. miRNA-Seq Data Analysis
Topics	<ul style="list-style-type: none">- Overview of NGS & detailed understanding- Data Retrieval (NCBI SRA) & Introduction to data types- Read Quality Check (FastQC & Cutadapt)- Alignment of reads using reference Genome (Tophat)- Visualization of mapped reads (UCSC / IGV / ArrayGen Genome Browser)- Gene Expression Quantification (Coverage, FPKM)- Differential expression analysis (Cufflink, cuffmerge & cuffdiff)- Different plots (Heatmap, volcano plot etc) using CummeRbund & R- Pathway & Gene ontology enrichment analysis- Pathway Network Analysis
Module - III	V. Metagenomics Data Analysis

Topics	<ul style="list-style-type: none"> - Introduction to Metagenomics - Quality Check & Filtering - Identification of rRNA sequence from reads - OTUs identification & Functional assignment - Taxonomic composition and relative abundance analysis - Diversity Analysis - Taxonomic Heatmap Analysis - Estimation of species richness and sampling depth analysis
Module - III	VI. RNA-Seq (Reference Based) Data Analysis
Topics	<ul style="list-style-type: none"> - Overview of NGS & detailed understanding - Data Retrieval (NCBI SRA) & Data types - Read Quality Check (FastQC & Cutadapt) - Alignment of reads using reference Genome (Tophat / STAR) - Visualization of mapped reads (UCSC & IGV) - Gene Expression Quantification (Coverage, FPKM) - Differential expression analysis (Cufflink, cuffmerge & cuffdiff) - Pathway & Gene ontology enrichment analysis - Pathway Network analysis using stringDB(PPI) & Cytoscape - Pathway Network Analysis using KEGG Mapper tool for all DEG genes - Basics on R programming - Different plots (Heatmap, volcano plot etc) using CummeRbund & R
Module - III	VII. Whole Genome Denovo Assembly
Topics	<ul style="list-style-type: none"> - Data Retrieval (NCBI SRA) & Introduction to data types - Read Quality Check (FastQC & Cutadapt) - Contig Assembly (SPAdes/SOAPdenovo/velvet/Masurca/Canu) - Scaffolding & Gap Closure - Assembly statistics (N50 value etc) - Repeat Masking - SRR Discovery - Gene/Orf prediction (prodigal/prokka/orf finder/Glimmer3/GeneMarkHMM/) - Functional annotation (Gene Ontology & Pathway (KEGG)/COG) - Genome and Gene representation using circos - Phylogenetic Analysis - Comparative genomics / Synteny Analysis
Module - III	VIII. scRNA Seq Data Analysis
Topics	<ul style="list-style-type: none"> - Overview of NGS & detailed understanding - Data Retrieval (NCBI SRA) & Introduction to data types - Read Quality Check (FastQC & Cutadapt) - Alignment of reads using reference Genome (Tophat) - Visualization of mapped reads (IGV) - Gene Expression Quantification (Coverage, FPKM) - Analysing single-cell RNA-seq data containing read counts using R programming <ul style="list-style-type: none"> • Quality control of cells • Filter out low abundance genes • Normalization of cell-specific biases • Denoising expression values using PCA • Defining cell clusters and detecting marker genes • Different plots using R (heatmap & expression plots)

Bioinformatics Internship Program

Areas of Internship-

1. Advanced Bioinformatics
2. Algorithm Development
3. Biological Database Development
4. Microarray Data analysis
5. NGS Data analysis
6. Custom projects

(100% One paper publication if you register for 6 months & 12 Months)

Duration- 1/2/3/6/12 Months

The areas of specialization offered are algorithm development, Microarray chip design, Microarray data analysis, advance bioinformatics and next generation sequencing data analysis.

This opportunity will help the applicant gain working experience on a real-time project and help build up base towards building a strong professional experience.

After the completion of the course you shall be granted a certificate that will notify your course completion.

For Fees Details Send Mail On info@arraygen.com



Internship

(national and International)

The areas of specialization offered are microarray data analysis, advance bioinformatics and next generation sequencing data analysis

More Information Visit: www.arraygen.com

We can customize the workshop course structure according to specific courses required by institutes/ organizations.

Please visit the link for workshop details: <http://www.arraygen.com/workshop-training.php>

We also conduct workshop for **PhD students and post-doctoral researchers** coming with their own real data sets. We provide them customized training and analysis of maximum four datasets. After this course they will be able to analyze their own data and create ready-to-publish graphics. Please find the categories below:

- 1) DNA methylation data analysis
- 2) RNA seq data analysis
- 3) ChIP-seq data analysis
- 4) DNA seq data analysis

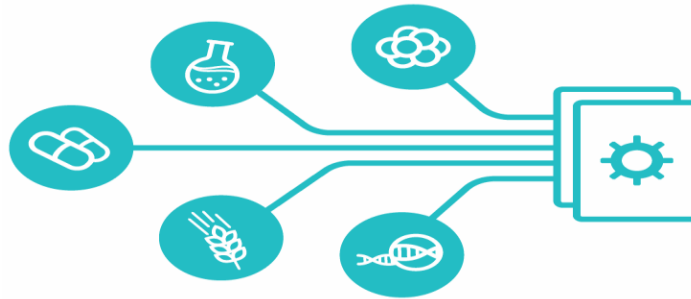
Please visit the following link for testimonials: <http://www.arraygen.com/training-testimonials.php>

Custom Data Analysis and Training-###

Custom Data Analysis Training Program which will cover Data Analysis of your custom data and training will be given to you with your datasets. All scripts will be shared during analysis.

Customized data Analysis available upon client's requirement and also, we will help you for the Publication Report Generation.

100% chance for expose
real-time experience in
Bioinformatics and
increase potency



BICP-Bioinformatics Industrial Certification Program (Online & Offline)

Program Overview

***Accelerating an automation in bioinformatics to reduce biological problem that improves Human Value and Accessible Everyone!**

***BICP mainly for life scientist and computer scientist to increase their serendipity to understand multi-disciplinary to make automate process by using bioinformatics approach.**

Program Design

- ❑ **Duration: 6 & 12 Months**
- ❑ **2 Months to became an expert in Genomics Bioinformatics and Programming (Java/Perl/Python)**
- ❑ **4 & 10 Months to became an expert to run Live NGS Genomics Project**
- ❑ Get more time to discuss to resolve your query for data analysis problem.
- ❑ The live competitive project can handle and get the experience in Next Generation Sequencing.
- ❑ Became on independent to write NGS Pipeline
- ❑ Get closer experience with industrial experience.
- ❑ Get equip with 100% skills development in Bioinformatics
- ❑ Get maximum support for publication

Features OF BICP 12 Months Program

- ❑ Hands on practical & Get Training from industrial experts with 9+ years of experience.
- ❑ Company Experience Letter, Certificate & recommendation letter will be Provide after completion of BICP Program.
- ❑ 100% placement at ArrayGen as per company terms & conditions
- ❑ Hands Placement will be based on technical interview
- ❑ All the trainings are based on industrial requirements and 100% skill development.
- ❑ After the BICP program all the student will be self-sufficient to carry out independent execution which assures 100% Placements to any company or JRF/SRF/PhD
- ❑ Hands on practical & Get Training from industrial experts with 9+ years of experience.

Fee Structure for BICP Program: -National & International

Please contact on info@arraygen.com & Call On +91 20 25395446

Mode of BICP Program (Online/Offline)

For Online Program

Our Online Program is same as Offline Program. For online program you need to have good internet speed in your computer and need to install Skype, AnyDesk (<https://anydesk.com/download>) which helps you to connect your computer to our computer for one to one interaction . Moreover, candidates will get full time support during BICP program.

For Offline Program

For Offline Program you need to come to our Pune office and along with your own laptop.

Apply Today..

Contact :

No:912025395446

+919673625446



Register Now!



**ArrayGen Technologies
Completed Projects**

1000+

**Projects
Executed**

ArrayGen Technologies Completed Projects

1. Development of Gene Expression Microarrays for more than 1500 organism
2. Custom development of JBrowse visualization Tool
3. Development of automated shell script for exome data analysis pipeline
4. Development of Gene cluster hovering algorithm from multigene BLAST output
5. Development of BLAST similarity HeatMap algorithm from BLAST output
6. Completed workshop in Bioinformatics in Nepal (BSN) and Fergusson College, pune
7. Completed online/offline bioinformatics training to more than 10 participants
8. Development of custom CGH arrays for screening oncogene rearrangement in Czech cancer project

many more ...

ArrayGen Technologies Ongoing Projects-

1. Development of algorithm for LAMP PCR primers designing for whole genome/gene/any regions
2. Development of Genome browser for Exome data analysis
3. Development of GUI based automated Exome data analysis Tool
4. Bioinformatics metagenomic data analysis from water sample
5. De novo genome assembly of yeast

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