



Dr. D.Y. Patil Vidyapeeth's  
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**IPSA AJIT KUMAR SINGH**

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Designation: Lecturer

Qualification : MSc. Bionformatics

**STRENGTH & SKILLS:**

Good analytical, interpersonal, communication & listening skills coupled with dedication and sincerity towards the assigned job.

**EDUCATION BACKGROUND:**

Course / Degree	Institute / Board	Grade
M.Sc (Bioinformatics)	Mumbai University	72.6
B.Sc (Microbiology)	Fergusson College, pune	60.33
H.S.C	Bhavans College, Maharashtra State Board	56
S.S.C	ICSE, Modern School	65.8

**EXPERIENCE**

\* Completed 9 Months Training on Next Generation Sequencing (NGS) from Xcelris Genomics, Ahmedabad

\* Completed 4 Months Industrial Training in Software Development from Rasa Life Science Informatics, Pune

**SKILLS**

**WET LAB SKILLS:**

Microbiological Techniques : Bioassay ,Plate Count , Plate Isolation(Pour plate), Inoculation

Molecular Biology Techniques: DNA isolation, Gel Preparation, Gel loading

**COMPUTER SKILLS :**

Languages and Scripts : Java(basic), C, C++, Perl scripts

Operating System: Linux(Ubuntu & Centos), Windows(XP/07/08)

Web technologies: HTML , XML ,Perl-CGI

RDBMS: Oracle SQL, SQL yog

### **BIOINFORMATICS SKILLS:**

\*Protein modeling

\*Secondary Structure: GORR IV, GORR V, CFSSP

\*Tertiary Structure: Swiss Model, Modeller 9.13

\*Docking Tools: Hex , AutoDock Vina, Swissdock

\*Active site Prediction Tool: DogSiteScorer , Activesite Prediction Tool, Discovery Studio

\*Molecular Visualization Tools: Rasmol , Pymol ,Discovery Studio ,Chimera \

\*Pharmacophore mapping: Ligand Scout 3.1

\*Phylogenetic Analysis

- comparative Analysis: MUMmer 3.12 ,Synteny plot

- Multiple Sequence Alignment: Clustal W, Muscle, Mega 6, Clustal omega

-Pairwise Sequence Alignment: BLAST , standalone blast , Blast All

\*Next Generation Sequencing (NGS) LINUX BASED –

- Quality check tool : FAST QC

- Filtration Tool: Trimmomatic

- SNP calling tool: SAMtool , Varscan ,SNver, GATK,Picard

- SNP Annotation – SNPeff - EMBOSS - to convert consensus to Fasta File & to predict ORFs

- BED TOOLS: to get a fasta file from BED file

### **PUBLICATION**

\* Bioinformatics Tool for Identification of Virulent Sequence in Viral Genome in CSI (Computer Society of India) NEWSTRAC

### **PROJECT UNDERTAKEN**

\* **Applied Digital Microsystem Life Tech Mumbai**

Duration: July 2013 to February 2014

Thesis “Drug Designing & Molecular Modeling of Beta Amyloid Inhibitors to Treat Alzheimer’s Disease”  
Technologies used: Marvin Sketch, AutoDoc Vina Tool 1.5.6, Discovery Studio, LigandScout 3.12, MDS.

\* Xcelris Genomics, Ahmedabad Project in NGS, “Comparative Genomic Study of drug Resistant Mycobacterium Tuberculosis and its Phylogenetic Study of whole Genome and its Core Gene.

Technologies used: FAST QC, Trimmomatic, SAM Tool, SNver, GATK, Picard, SNPeff, EMBOSS Tools, MUMmer, Clustal W, Muscle and Mega 6

### **ACADEMICS ACHIEVEMENTS**

-Done a project on “bioluminescence in flora”, organized by botany department Fergusson College Pune.

-Submitted research paper on “Bioinformatics Tool for Identification of Virulent Sequence in Viral Genome” in UGC approved 2-days National Conference titled “Research in IT: Explore the Technology Horizon”

-Attended one day National Seminar on "Advances in Bio-Imaging" held in University of Mumbai(Kalina University, Santacruz).

-Certificate training done in RASA Life science informatics of "Software development" which included SQLyog, JAVA, BIO-JAVA and CDK for 3 months.

- Attended a 2 days program by Cytel in SAS programming.
- Got selected by BCIL for 6 months bioinformatics training in Xcelris Genomics, Ahmedaba field of next generation sequencing.

### **EXTRACURRICULAR ACTIVITIES**

- Learned Kathak and have done Praveshika in kathak from Akhil Bharatiya Gandharv Maha Vidyalaya Mandal, Mumbai
- Completed first and second year from Prayag Sangeet Samiti, Lucknow(Music School)
- Represented college in Badminton championship, Fergusson Pune.
- Member of dramatics event held by Xcelris Lab, Ahemdabad.

### **COMPETENCIES**

- Quick learner & adapts well to changes and pressure in work place
- Managing relationships & working efficiently with diverse groups of people
- Committed to meeting deadlines and schedules
- Leadership skills to lead projects & handle work independently

### **DECLARATION**

I hereby declare that the details above are true to the best of my knowledge.

Mumbai