Mrs. AISHWARYA DIGVIJAY JADHAV
Assistant Professor, Department of Bioinformatics,
Rajiv Gandhi Institute of Information Technology and Biotechnology,
Bharati Vidyapeeth (Deemed to be University), Pune - 411046
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Professional Summary

Assistant Professor in Bioinformatics with **10+ years of teaching experience** at undergraduate and postgraduate levels. Experienced in Bioinformatics, computational biology, programming, genomics, structural bioinformatics, molecular modelling, molecular docking, molecular dynamics simulations, and computational drug discovery. Experienced in student project guidance, examination and question-paper setting, academic mentoring, and conducting hands-on workshops. Active researcher with publications and ongoing research in **molecular docking, molecular dynamics simulations, phytochemical-based drug discovery, and AI-driven bioinformatics**.

Career Objective:

To contribute as an Assistant Professor in the field of Bioinformatics by utilizing my extensive teaching experience, computational expertise, and research skills. I aim to provide effective teaching and mentorship to undergraduate and postgraduate students while actively contributing to academic development, research, innovation, and the growth of the institution.

Educational Qualification:

- Ph.D in Biotechnology (Pursuing) from Bharati Vidyapeeth (Deemed to be University) in academic year 2021.
- M.Sc. Bioinformatics from Bharati Vidyapeeth (Deemed to be University) with Sem-I 9.20/10 CGPI, Sem-II 9.27/10 CGPI, Sem-III 9.50/10 CGPI and Sem-IV 9.40/10 CGPI in 2016.
- B.Sc. Biotechnology from Shivaji University (Y.C.College of Science, Karad) with 67.04% in 2014.

Work Experience:

1) **Assistant Professor, Department of Bioinformatics**
   Rajiv Gandhi Institute of Information Technology and Biotechnology, Bharati Vidyapeeth (Deemed to be University), Pune
   [August, 2026 – Present]

- Teaching undergraduate and postgraduate courses in Bioinformatics and related computational sciences.
- Conducting theory and practical sessions in programming, bioinformatics, genomics, structural bioinformatics, molecular modelling, and computational drug discovery.
- Guiding undergraduate and postgraduate student projects and providing academic mentorship.
- Involved in curriculum delivery, examination and question-paper setting, evaluation, and other academic responsibilities.

- Contributing to research activities in computational drug discovery, molecular docking, molecular dynamics simulations, and AI-driven bioinformatics.

2) Visiting Faculty, Department of Bioinformatics
Rajiv Gandhi Institute of Information Technology and Biotechnology, Bharati Vidyapeeth (Deemed to be University), Pune
[June 2016 – July 2026]
Taught the following courses:

- Basics of Computer and C Programming (Theory + Practical)
- Basic Programming for Bioinformatics (Theory + Practical)
- Basics of Bioinformatics (Theory + Practical)
- Perl Programming (Theory + Practical)
- Genomics and Proteomics (Theory + Practical)
- Current Bioinformatics (Theory + Practical)

3) Visiting Faculty, Department of Bioinformatics
Dr. D. Y. Patil Arts, Commerce & Science College, Pimpri, Pune
[September 2022 – January 2023]

- **Total Teaching Experience: 10+ Years**

Technical Skills:

- **Programming:** C, Perl, Core Java, Python, R
- **Operating Systems:** Windows, Linux/Ubuntu, Unix
- **Biological Databases:** NCBI, EMBL, DDBJ, GenBank, PDB, OMIM, SCOP, CATH, PROSITE, Pfam
- **Sequence Analysis:** BLAST, FASTA, ClustalW, MUSCLE, T-Coffee
- **Molecular Visualization/Modelling:** PyMOL, Rasmol, Cn3D, Chimera, Swiss-PdbViewer, Spartan, Marvin Sketch
- **Molecular Docking:** AutoDock, AutoDock Vina, Gnina, MMGBSA, Discovery Studio, LigandScout, DruLito
- **Genomics & NGS:** Genome browsers, IGV, genome coordinate manipulation, RCircos, gene-list enrichment analysis, RNA-seq, ChIP-seq, differential gene expression, structural variant analysis, microarray analysis.

Academic Projects:

- **M.Sc.:**
  Major Qualifying Project (2015-2016): Development of Biodiversity analysis tool for Metagenomic data.
  Description: Present study focuses on Developing the tool for biodiversity analysis of metagenomic data. In which user can upload the metagenomic data like fasta sequences and tool gives out some graphical representation of that data so that user can analyze the biodiversity among that.
- **B.Sc.:**
  Major Qualifying Project (2013-2014): Production of amylase using banana waste by *Bacillus subtilis* under solid state fermentation.
  Description: Present study focuses on the isolation of the micro-organisms from soil sample and its utilization for amylase production. The isolated microorganism was identified as *Bacillus subtilis* based on biochemical characters. Amylase production was studied using

Banana waste and starch as a substrate. In case of Banana waste amylase production was studied using solid state fermentation (SSF) technique. Various process parameters were optimized such as incubation pH and incubation temperature. The organism showed optimal amylase activity at temperature 40^{o}C and at pH 7.

Publications:

1) **Jadhav A**, Singh EA, Bhayye S, Patil-Chunarkar P. "Molecular docking and molecular dynamics simulations of anti-inflammatory phytochemicals". Indian Journal of Pharmacology 2026.
2) **Jadhav A**, Singh EA, Bhayye S. "Identification of Potential Anti-Inflammatory Phytochemicals Targeting Endothelial Protein C Receptor (EPCR) Through Molecular Docking and Molecular Dynamics Simulations". Int J Drug Deliv Technol. 2026;16(64s):617-626. DOI: 10.25258/ijddt.16.64s.60
3) **Jadhav A**, Singh EA. Book chapter "Artificial Intelligence-Driven Bioinformatics for the Discovery of Anti-Inflammatory Natural products from medicinal plants" is accepted for publication in Digital Transformation in Healthcare and Nursing: AI, Telemedicine, and Smart Care Book.
4) **Jadhav A**, Singh EA, Bhayye S. "In Silico Identification of Novel Phytochemical Leads Targeting TGFBR1 for Anti-Inflammatory Drug Discovery" is under communication.

Workshops Conducted / Resource Person:

1) **Resource Person**, "One-Day Workshop on Genome Annotation", Department of Microbiology, S. M. Joshi College, Hadapsar, Pune, 4 May 2023.
2) **Resource Person**, "Two-Day Online Workshop on Bioinformatics", Department of Life Science, Sanjivani Arts, Commerce and Science College, Kopargaon, 8th –9th April 2022.

Workshop and Conferences attended:

- **Presented a research paper** at International Conference on Healthcare Innovations in Software, Engineering & Technology (**HISET-2025**) held on 17th and 18th Nov 2025 at Krishna Vishwa Vidyapeeth (Deemed to be University), Karad.
- **Presented a research paper** at International Conference on Microbiology for Sustainable Future: Developmental Perspectives Science, Satara. **(ICMSFDP-2026)**, organized by the Department of Microbiology, Yashavantrao Chavan Institute of Science, Satara.
- **Presented a research paper** at National Conference 2026: Emerging Trends in Food, Medical and Industrial Biotechnology, organized by the Department of Biotechnology, Sir Parshurambhau College, Pune.
- Attended 3-days hands-on workshop on "**Artificial Intelligence in Computational Drug Discovery**" conducted by Rajiv Gandhi Institute of IT and Biotechnology, Pune on 29th-31st July, 2025.
- Attended 2-days workshop and hands-on-training on "**Drug Designing**" organized by Rajiv Gandhi Institute of IT and Biotechnology, Pune on 19th and 20th October, 2023.
- **Presented poster** on "**Evolution of Android apps for health care with artificial intelligence**" at Data mining conference organized by Alana institute of management and sciences (2016).
- Attended a one-day workshop on the "**Internet of things"** organized by Sinhgad Engineering Institutes (2015).
- Attended 3-days conference on "**Recent Trends in Drug Development"** RTDD-2015.
- One day seminars on **SAS programming** organized by ClipLab (2016).

Personal Details:

- Date of Birth: 14.4.1994
- Languages known: English, Marathi, Hindi
- Marital status: Married.

Personal Skills:

- Sincere and Hard worker.
- Dedicated and self-motivated.
- Driven apply new ideas.
- Goal oriented and Honest.
- Problem solving Skills.

References:

1) Dr. Shamim Shaikh
   Principal
   Rajiv Gandhi Institute of IT & Biotechnology,
   Bharati Vidyapeeth (Deemed to be University)
   Pune – 46.
   Contact no.:9823012032
   Email Id: shamim.shaikh@bharatividyapeeth.edu

2) Dr. E.A. Singh
   Vice-Principal
   Rajiv Gandhi Institute of IT & Biotechnology,
   Bharati Vidyapeeth (Deemed to be University)
   Pune – 46.
   Contact no.: 9421019453
   Email.ID: Elangbam.Singh@bharatividyapeeth.edu

3) Dr. Pritee Chunarkar-Patil
   Ass. Professor and HOD
   Dept. of Bioinformatics
   Rajiv Gandhi Institute of IT & Biotechnology,
   Bharati Vidyapeeth (Deemed to be University)
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