Shubham Mahindrakar

shubhammahindrakar2104@gmail.com 9307414686

linkedin.com/in/shubham-mahindrakar-132394283 https://github.com/ShubhamBioIT

PROFILE

MSc Bioinformatics student with experience in Python programming, data science and genomics analysis. Involved in applying AI and machine learning to bioinformatics, with a focus on developing solutions Specially Webtools and Webapps for research challenges in biotechnology.

EDUCATION

M.Sc. Bioinformatics 08-2024 – present
Amrita School Of Biotechnology Kollam, India
Current CGPA - 8.06

B.Sc. (Hons.) Biotechnology 08-2020 – 07-2023
Walchand Centre For Biotechnology Solapur, India
CGPA - 9.06

12th HSC Board 06-2018 – 02-2020
Walchand College of Arts and Science Solapur, India
60%

10th SSC Board 06-2017 – 03-2018
Swami Vivekanand Prashala Solapur, India
89%

PROFESSIONAL EXPERIENCE

Project Intern 11-2024 – 07-2025
Amrita Mind Brain Centre Amritapuri, Kerala
Developed an Web based Tool for RNA Secondary Structure prediction using Zuker's Algorithm Using HTML,CSS,JS for Virtual lab experiment at Amrita vishwa vidyapeetham

Summer Intern 03-2025 – 05-2025
Ediglobe Bangalore-Remote
Completed a hands-on internship where I first built a strong foundation in Python programming and then transitioned into real-world Machine Learning Project.

PROJECTS

MultiVI: Streamlit-based Single-Cell Multi-Omics Integration and Visualization Tool (Ongoing) 10-2025 – Present
Amrita school of Biotechnology
Currently developing an interactive Streamlit application for integrating and visualizing single-cell RNA and ATAC sequencing data using MultiVI and machine learning approaches for biological insight discovery.

Reproducible Single-Cell Transcriptomics Analysis Using the Bollito Pipeline (Ongoing) 10-2025 – Present
Amrita school of Biotechnology
Implementing and validating the **Bollito scRNA-seq pipeline** for reproducible single-cell gene expression profiling across diverse biological datasets to improve automation and reliability in transcriptomic data analysis.

Predicting 10-Year Risk of Coronary Heart Disease using Machine Learning 05-2025 – Present
Ediglobe
This project uses the Framingham Heart Study dataset to predict whether a patient has a 10-year risk of coronary heart disease (CHD) using machine learning classification techniques.

Efficient RNA Secondary Structure Prediction using Zuker's Algorithm (Virtual Lab Tool) 11-2024 – 06-2025
Amrita Mind Brain centre
Developed a web-based interactive simulation tool using HTML5, CSS, and JavaScript for the Bioinformatics Virtual Lab (Amrita Vishwa Vidyapeetham), part of the Government of India's Virtual Labs initiative.

ML-Based Prediction of Huntington's Disease Severity Using Genetic & Clinical Features 04-2025 – 05-2025
Build a Machine Learning (ML) model to predict Huntington's Disease stage (Early, Middle, Late, Pre-Symptomatic) using genetic & clinical data.

In Silico Docking and Interaction Validation Of STOCK6S-84928 With Sterol 24-C-Methyltranferase(LdSMT) in Leishmania donovani 04-2025 – 05-2025
Amrita school of Biotechnology
Performed molecular docking using AutoDock to evaluate the binding affinity of STOCK6S-84928 with Sterol 24-C-Methyltransferase(LdSMT) from *Leishmania donovani*. Analyzed key protein-ligand interactions with Discovery Studio, identifying critical residues involved in stable binding for future ligand optimization.

Comprehensive Bioinformatics Analysis of Human Breast and Ovarian Cancer Syndrome(HBOC) 09-2024 – 11-2024
Amrita school of Biotechnology
analyzed the genetic mutations, gene expression, protein structure, and pathway disruptions of BRCA1, BRCA2, PALB2, and TP53 in the context of HBOC syndrome using bioinformatics tools and databases.

Drug-Target Binding Affinity Explorer: From Data Analysis to Streamlit App 03-2025 – 05-2025
Amrita school of Biotechnology
In this project, I Analyzed, Preprocessed & Normalized drug–target binding data Using Python Libraries and created an interactive Streamlit tool for visualizing binding affinity patterns based on Ki values for bioinformatics and drug discovery research.

COURSES

Python for Data Science, AI & Development 01-2025 – 03-2025
Coursera

Bioinformatics Methods and Tools 08-2024 – 09-2024
BioTecNika

Hands on Advanced Instrumentation 08-2022 – 02-2023
Walchand centre for Biotechnology, Solapur

SKILLS

- Computational Biology
- Deep Learning
- Molecular Docking
- Python Programming
- Machine Learning
- Sequence Analysis
- MySQL
- R programming
- Linux

AWARDS

Best Paper Award (First Place) - ICSRF'2025 01-09-2025
Amrita Vishwa Vidyapeetham, Kollam, Kerala
Got First Prize for Our research paper titled "Self Guided Bioinformatics learning through virtual labs : Towards sustainable, Inclusive learning"
Presented at ICSRF'25 held at Amritapuri campus, kerala, India

First Prize (Top Ranker) in 10th Class 05-2018
Swami Vivekanand Prashala, Solapur, Maharashtra

PUBLICATIONS

Self Guided Bioinformatics learning through virtual labs : Towards sustainable, Inclusive learning 30-08-2025
Accepted, Scopus indexed, DOI forthcoming.

WORKSHOPS

- Introduction to Machine Learning in Genomics-IBAB
- Molecular Docking: Theory to Application
- National Seminar and Workshop on Next-Generation Sequencing & Data Analysis
- Molecular Dynamics Simulation

CONFERENCE

ICSRF'2025 08-2025 – 09-2025
Amrita Vishwa Vidyapeetham, Amritapuri, Kerala

Aavishkar'2022- Project Competition 12-2022 – 12-2022
Punyashlok Ahilyadevi Holkar Solapur University, Maharashtra
Presented Our project on "Biocleaner and Biofertilizer production from fruit peel waste, emphasizing sustainable waste management and echo-friendly practices in agriculture"

LANGUAGE PROFICIENCY

English, Hindi, Marathi to Read, Write, Speak and Understand | Telugu , Kannada to Understand