JUBAIRUL ISLAM (HASAN)

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 zubairhasan97.github.io | Jubairul Islam

ACADEMIC CREDENTIALS

Masters of Science in Medical Biotechnology   [*Nov 2023 – Current*]
Alma Mater Studiorum - Università di Bologna, Bologna, Italy
Research Interest: Medical Genomics and Bioinformatics for Health and Diseases

Bachelor of Science in Genetic Engineering and Biotechnology   [*Feb 2017 – March 2022*]
Shahjalal University of Science and Technology (SUST), Sylhet, Bangladesh
Final GPA: 3.18 / 4.00
Bachelor Thesis: "Subtractive genome analysis of *Yersinia pestis* to identify potential therapeutic targets for drug development approach"

RESEARCH EXPERIENCE

Thesis Project [*2021 – 2022*]
Conducted the final year thesis of bachelor study under the supervision of **Assistant Professor G.M. Nurnabi Azad Jewel** entitled *"Subtractive genome analysis of Yersinia pestis to identify potential therapeutic targets for drug development."*

• Designed the research pipeline and workflow
• Employed a new dimension to the project by incorporating pangenome analysis
• Performed automation, data analysis, and visualizations using in-house scripts, i.e., Bash/Python/R
• Conducted result interpretation and drafted publishable manuscript

Case Study [*2018*]
Carried out on-field study and reporting of genetic disease *"Congenital atresia ani with rectovaginal fistula"* in domestic cattle around the local Sylhet region under the supervision of **Professor Dr. Mohammad Jakir Hosen**.

• Led a group of five members on the case study
• Collected data from the regional veterinary hospitals, offices, and local farms
• Recorded medical histories and analyzed the pedigree of local male and female calves

PROFESSIONAL EXPERIENCE

Junior Executive – Research & Quality Control   [*May 2022 – September 2022*]
Shikho Technologies Bangladesh Ltd., Banani, Dhaka

Ensured the quality of educational content of secondary and upper secondary-level **Biology** and **Chemistry**.

• Maintained the quality of 1700+ video lessons and 1000+ smart notes on the Shikho mobile app.
• Created 87+ video lesson scripts for secondary and upper-secondary Biology and Chemistry.
• Collaborated with the Research & Development team on making creative bite-size Chemistry lessons.
• Awarded top performer of the 2nd quarter of the year 2022.

PUBLICATIONS

Jubairul Islam, Himadree Sarkar, Hammadul Hoque, Md. Nazmul Hasan, G.M. Nurnabi Azad Jewel. "In-silico approach of identifying novel therapeutic targets against Yersinia pestis using pan and subtractive genomic analysis." *Computational Biology and Chemistry, Elsevier* (2022). https://doi.org/10.1016/j.compbiolchem.2022.107784

CORE SKILLS AND COMPETENCIES

Dry Lab Skills:
Scientific Database (NCBI, GenBank, UniProt, PDB) / Subcellular Localization Tools (PSORTb, CELLO) / Sequence alignment (BLAST, ClustalW) / Phylogenetic tools (MEGA, ClustalX) / Sequence Clustering (CD-Hit) / Molecular Dynamic Simulation (GROMACS) / Pangenome analysis (GET_HOMOLOGOUS) / Protein-protein interactions databases (STRING) / CytoScape / Molecular Docking (AutoDock Vina 4) / Homology Modeling (SWISS-MODEL)

Wet Lab Skills:
DNA-RNA isolation / Gel Electrophoresis / Culture Media Preparation / Cell culture / Cell Passaging and Subculture / Centrifugation / PCR / Immunohistochemistry Techniques / Genome Editing (CRISPR-Cas9) / Sanger Sequencing

Programming Skills:
Python 3 / Basic R programming (R Studio) / Bash-scripting / Basic HTML, CSS, and JavaScript

Technical Skills:
Linux Distros (Ubuntu, Linux Mint) & Windows 10 / Latex (Overleaf) / G suite (Gmail, G-Drive, G-meet, Classroom) / Microsoft Office (Word, PowerPoint, Excel) / Bibliographic Software: Zotero, Mendeley

Soft Skills:
Research Planning and Organizing / Tutoring / Oral Presentations / Written and Verbal skills / Teamwork and Leadership

ADDITIONAL COURSES AND WORKSHOPS

- Hands-on lab training on genome editing tool "CRISPR/CAS9" by COB & BioBangla at SUST **(2020)**
- Remote training in Bioinformatics for Biologists: Linux, Bash, and R by Wellcome Genome Campus **(2022)**
- Data analysis and visualization with Python – Certification by freeCodeCamp **(2022)**
- Introduction to Python course by Kaggle **(2021)**
- Introduction to Machine Learning by Kaggle **(2023)**
- Bioinformatics BootCamp (10 days long) 1.0 by CHIRAL Bangladesh **(2023)**

VOLUNTEERING AND AFFILIATIONS

Executive at ISCB Regional Student Group – Bangladesh [*2020 – Current*]
An active member of the International Society for Computational Biology (ISCB), Bangladesh region
Responsibilities: Host webinars, organize events, and promote ISCB vision among young life science students.

Learning Resource Executive at CANSi Research Institute (SUST) [*2018 – 2019*]
Departmental learning club in the field of Bioinformatics and Molecular Biology
Responsibilities: Prepare training materials and organize educational or training events in the department.

Content developer at Shikhon.org [*2017*]
Volunteered in online question development for primary and secondary-level students with science backgrounds
Responsibilities: Developed creative questions and problem sets for Math/Chemistry/Physics courses.

LINGUISTIC SKILLS

Bengali – Native Speaker
Italian – Elementary (A1 level)
German – Elementary (A1 level)
English – Advanced Proficiency (IELTS C1)

Overall	Listening	Reading	Speaking	Writing
7.5	7.5	7.5	7.5	7.0