Yash Mathur

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Publications

DATE	AUTHORS & TITLE	IMPACT FACTOR
2023	**Yash Mathur,** et. Al; Genome-Wide Analysis of Kidney Renal Cell Carcinoma: Exploring Differentially Expressed Genes for Diagnostic and Therapeutic Targets; OMICS: A Journal of Integrative Biology (2023) 27(8):393-401; DOI: 10.1089/omi.2023.0056	3.3
2023	Afsar Alam, Mohammad Shahzeb Khan, **Yash Mathur,** et. Al; Structure-based identification of potential inhibitors of ribosomal protein S6 kinase 1, targeting cancer therapy: a combined docking and molecular dynamics simulations approach; Journal of Biomolecular Structure and Dynamics (2023) 26:1-12; DOI: 10.1080/07391102.2023.2228912	3.5
02/2022	**Yash Mathur**, et. Al; PyPAn: An automated graphical user interface for protein sequence and structure analyses; Protein & Peptide Letters (2022) *Ahead of print; PMID: 35142267;* DOI: 10.2174/0929866529666220210155421	1.89
10/2021	Taj Mohammad, Arunabh Choudhury, Insan Habib, Purva Asrani, **Yash Mathur**, et. Al; Genomic variations in the structural proteins of SARS-CoV-2 and their deleterious impact on pathogenesis: A comparative genomics approach. Front. Cell. Infect. Microbiol. (2021) 11, 951; DOI: 10.3389/fcimb.2021.765039	5.29
10/2020	Taj Mohammad, **Yash Mathur** and Md. Imtaiyaz Hassan; InstaDock: A Single-click Graphical User Interface for Molecular Docking-based Virtual High-throughput Screening. Briefings in Bioinformatics (2020) 00, 1-8. (Co-First author) DOI: 10.1093/bib/bbaa279	13.99

Professional experience

Project Assistant (July 2020 – April 2023)

Working under the supervision of Dr. Md. Imtaiyaz Hassan at the Centre for Interdisciplinary Research in Basic Sciences, Jamia Millia Islamia, New Delhi, India

- Developed an automatic GUI protein docking tool using Python
- Developed a GUI tool to help beginners in the field of proteomics with many proteomic analytical tools
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PhD Scholar (April 2023 – present)

Tentative thesis title: *Employing Generative Deep Learning Models for Strategic Advancements in Drug Development*

Under the supervision of Dr. Md. Imtaiyaz Hassan at the Centre for Interdisciplinary Research in Basic Sciences, Jamia Millia Islamia, New Delhi, India

Educational qualification

YEAR	DEGREE	UNI/INSTITUTE/SCHOOL
2018 – 2020	M.Sc. Bioinformatics	Jamia Millia Islamia, New Delhi, India
2015 – 2018	B.Sc. (Honors) Microbiology	Bhaskaracharya College of Applied Sciences, University of Delhi, New Delhi, India
2014 – 2015	Higher Secondary Examination (12th), CBSE, New Delhi	St. Paul's School, New Delhi, India
2012 – 2013	Secondary School certificate examination (10th), CBSE, New Delhi	St. Paul's School, New Delhi, India

Skills

BIOINFORMATICS SKILLS

Common bioinformatics tools and servers including but not limited to BLAST, MODELLER, PyMol, PyRx, Discovery Studio, AutoDock, Energy minimization using SPDBV.
Advanced bioinformatics applications E.g., GROMACS and VMD, Cheminformatics analysis using Marvin and OpenBabel, protein model building and refining using WinCoot.

PROGRAMMING SKILLS

Python:
Libraries: PyQt5 (GUI development), Django (web development), TensorFlow (machine learning), NumPy, SciPy, Pandas (data manipulation), Matplotlib, Seaborn (visualization).

Kotlin:
Android Development: Building and deployment.

R:
Libraries: ggplot2 (visualization), limma, DESeq2 (RNA-Seq analysis), NOISeq (noise-filtering).

C:
Basic Programming: Syntax and foundational methods.

Java:
BioJava: Bioinformatics data manipulation.
Development: GUI (Swing, JavaFX), Android apps.

Perl:
BioPerl: Bioinformatics toolkit.
Scripting: CGI, DBI (database interaction).

C++:
Qt5: Application development.
OpenGL: Graphics programming.

SQL:
Database Management: Design, query optimization, Big Data handling.