QUDSEEN SULTANA

United States| f.qudseensultana001@umb.edu| LinkedIn| Portfolio

➢ Education:

Master of Science, Computer Science   *Sept 2022 – Dec 2023*

University of Massachusetts Boston, Boston, MA | GPA: 3.77

Relevant Coursework

Theory of computation, User Interface Design, Object-Oriented Design and Programming, Database Application Development, Computer Vision, Biomedical signals processing, Analysis of Algorithms.

➢ Technical Skills:

Programming Languages: Java, Python, Bash Scripting, JavaScript, C- Programming, HTML/CSS

Framework, libraries, tools: Pysam, Plotly, Dash, React.js, Node.js, Cannon.js, Docker, Jira, Figma,Git

Databases: MySQL, MongoDB

➢ Experience:

Graduate Research Assistant | University of Massachusetts Boston, Boston, MA   *Aug 2023 – Jan 2024*

- Spearheaded the development of a Python-based web-app/dashboard to visualize complex genomic data, enhancing data accessibility and analysis. (URL)(GIT)
- Contributed to research in single-cell transcriptomics, utilizing RNA-seq, sRNA-seq, and tools like Cell Ranger and velocyto on HPC (chimera cluster).
- Partnered with wet lab teams to process extensive NGS datasets, employing Pysam, Bash scripting, and SnakeMake.
- Improved analysis efficiency by 15% through optimized data processing techniques and pipelines.

Graduate Teaching Assistant | University of Massachusetts Boston, Boston, MA   *Jan – June 2023*

- Collaborated with Engineering instructor to enhance lectures, discussions, and feedback for Probability and Random Processes and Advanced Digital Design courses.
- Designed, managed, and graded projects and assignments for 44 students.

Intern | ENRUN INDIA, Hyderabad, India   *Oct – Dec 2021*

- Engineered a remote-access environment resulting in a 30% reduction in energy consumption.
- Evaluated the environment's efficacy using a variety of wireless communication technologies, including Wi-Fi, GSM, Bluetooth, and ZigBee.

➢ Publications:

- The essential genome of Plasmodium knowlesi reveals determinants of antimalarial susceptibility **2024**, **Under Review, Science.**

    Brendan Elsworth, Sida Ye, Sheena Dass, Jacob A. Tennessen, **Qudseen Sultana**, Basil T. Thommen, Aditya S. Paul, Usheer Kanjee, Christof Grüring, Marcelo U. Ferreira, Marc-Jan Gubbels, Kourosh Zarringhalam, Manoj T. Duraisingh

➢ Projects:

Capstone Project Management Portal (URL) (GIT)   *Sept– Dec 2023*

- Led a team to develop a robust MERN stack-based web application, employing Agile Methodology to optimize capstone project management for educators.
- Deployed the application on Render.com, ensuring accessibility and scalability for diverse educational needs.

E-Commerce Website   *Jan – May 2023*

- Crafted a state-of-the-art e-commerce website dedicated to doll sales, employing ReactJS to ensure an intuitive and responsive user interface.
- Used Java as the backend technology, MySQL database and Apache tomcat server.

Food For Everyone Mobile Application (GIT)   *Sept – Dec 2022*

- Innovated the user interface of a mobile application utilizing HTML, CSS, and JavaScript, to alert users about potential allergens in their orders.
- Built a responsive interface, seamlessly integrating allergy-sensitive warning systems to enhance user safety and experience.