

**madiha1ahmed@gmail.com**  
**+1 (905) 325 1764**

**7701 Lundy's Lane,  
Niagara Falls,  
ON L2H 1H3, Canada**

**WWW:**  
<https://www.linkedin.com/in/madihamariamahmed/>

## Skills

- Python Programming
- Linux/UNIX systems
- SQL
- Retrieval Augmented Generation (RAG)
- Agentic AI
- Web Application Development
- Mathematics and Statistics
- Data Analysis and Visualization
- Machine Learning
- Interdisciplinary Research
- Tableau
- Microsoft Excel
- Communication
- Technical Presentations

## Education

*01/2024*  
**Master Of Science:**  
Mathematics and Statistics  
**Brock University**  
St. Catharines, ON, Canada  
GPA: 92%

*08/2021*  
**Bachelor Of Technology (Honors):**  
Data Science  
**Jain University**  
Bangalore, India  
GPA: 8.183

# Madiha Mariam Ahmed

## Professional Summary

Data Engineer and extensive Researcher with a strong foundation in Machine Learning, data analysis and visualisation using Python (NumPy, Pandas, PyTorch, Matplotlib and Seaborn). Proficient in designing and implementing AI-driven solutions for drug design and healthcare using high-dimensional molecular data. Actively seeking roles to leverage interdisciplinary expertise and contribute to impactful AI innovations.

## Experience

### **DigiBiomics - Data Engineer**

*Mississauga, Ontario*

*07/2024 - Current*

- Design and implement AI-driven solutions for mental health and lung disease datasets.
- Collaborate with interdisciplinary teams to integrate AI into healthcare workflows.
- Deliver technical solutions aligned with organizational goals, ensuring stakeholder engagement and compliance.
- Contact :Dr. Meraj Khan -meraj.khan@digibiomics.com

### **Brock University - Graduate Research Assistant**

*St. Catharines, Canada*

*06/2023 - 05/2024*

- Conducted cutting-edge research in multi-target drug design under a federal AI for Design Challenge.
- Developed and tested counter-docking algorithms to evaluate Protein-ligand interactions.
- Co-authored the research article "Several Birds with One Stone: Exploring AI Methods for Multi-Target Drug Design" published in Molecular Diversity and NRC Journals.
- Contact :Dr. Yifeng Li (Canda Research Chair) yli2@brocku.ca

### **Brock University - Graduate Teaching Assistant**

*St. Catharines, Canada*

*01/2022 - 01/2024*

- Facilitated Math Learning Center Hours and weekly labs for undergraduate students.
- Assisted students in Python programming, MS Excel, Maple software and statistical assignments.
- Evaluated academic submissions using Crowdmark and provided constructive feedback.

## Certifications

- Bioinformatics - Algorithms and Applications Certification (IIT-Madras, 2022)

## Awards

- Match of minds 2023 (2023)
- DGS Spring Research Fellowship (2023)
- International Fellowship (2022)
- Graduate Fellowship (2022)

## Languages

- English
- Urdu

## Interests

- Coding
- Teaching
- Reading
- Crochet
- Baking

## Volunteer Work

### **Al-Mahdi Learning Institute - Math and Science Instructor**

*Niagara Falls, Canada*

*08/2024 - Current*

- Design and deliver engaging lessons for Grade 4, 5, 6 and 7 students, focusing on inquiry-based learning in math and science.
- Organise extracurricular activities and foster a collaborative learning environment.

## Conference Presentations

- Attention-based molecular generative model integrated with Deep Evolutionary Learning for multi-objective drug design, Faculty of Mathematics and Science (FMS) Graduate Conference, September 2023
- AI-Generative model for de novo multi-target drug design for Cancer, 3 Minute Thesis (3MT), April 2023. Qualified as one of the top 7 at Brock University
- Deep Clustering of high-dimensional and complex molecular data, Faculty of Mathematics and Science (FMS) Graduate Conference, September 2022

## References

Additional references available upon request.