**To Whom It May Concern**

Introducing Johra Muhammad Moosa, currently working as an assistant professor in the Department of Computer Science and Engineering (CSE), Bangladesh University of Engineering and Technology (BUET), and one of my esteemed students is definitely a pleasure for me. She has been a student of mine since 3rd year of her undergraduate class and also a member of my research group “A*l*eda”. I was her supervisor of undergraduate thesis. Besides she enrolled into my M.Sc. course named “Meta-Heuristics” (CSE 6705). I am also one of the co-author of her paper published in the journal BMC Medical Genomics which presents her graduate (M.Sc.) thesis work.

Her undergraduate thesis, a problem of Stringology, was supervised by me. Her group presented LCAIS (Longest Common Almost Increasing Subsequence), a novel problem of theoretical computer science with significant application in Bioinformatics. The work is later published in Journal of Discrete Algorithms. Yet she always had an immense interest in bioinformatics and computational biology. As the topic for research project of the graduate course Meta-heuristics, conducted by me, her team chose “Genome Rearrangement Problems”, which is one of the core problems in computational biology. She along with the team developed an advanced GA based algorithm (and a small Java program) to address the problem. This is the time I became sure of her great passion in bioinformatics field. Johra, curious by nature, always has a tendency to explore newly emerging problems and publications of bioinformatics. As part of her graduate thesis work she developed a modified Artificial Bee Colony to address the problem of gene selection for classifying cancer. The goal is to select minimum number of genes that are deemed to be significant for cancer along with improvement of predictive accuracy by analyzing gene expression data. The newly proposed method achieved satisfactory results. I was her MSc thesis supervisor until my sabbatical leave and later I continued to guide her throughout the journal publication. The main challenge of this work was that the program is time consuming, and the data dimension is high. Still she had successfully faced the challenges of this thesis. The research is later published in BMC Medical Genomics.

In last few years, I have seen her go through many hurdles. It is really appreciable how she has overcome all the difficulties with courage to shine in her current position. She set her own goals, plan well to achieve them, and withstand the obstacles efficiently. Potential of Johra in becoming successful in higher studies and research has come to my attention during my academic interactions with her. She is very sincere and extremely motivated that comes from her inner confidence and innovativeness. In my view she is destined to make a difference by writing her own success stories. Throughout our long-term research collaborations, I have noticed her to outstand individually and also as a team member.

As a coworker I found Johra conscientious. As far as I remember I gave her responsibilities without any worries. Her enthusiasm and dedication is impeccable. During my tenure as a head, she received excellent peer review for course conduction. Her leadership and organizational capacity is also pretty amazing. As a faculty member of the Department of CSE, BUET, she served as an organizing committee member in quite a few conferences, workshops, and seminars. She has also anchored some of these events which show that she is a fluent public speaker.

I feel proud to say that sincerity, dedication, talent, and ability to work hard the qualities I marked in Johra. As an enthusiastic young woman from a third world country if equipped with the necessary tools and resources to excel, she will grab the opportunities to come out successful. I firmly believe that pursuing PhD in our reputed university will partially quench her thirst to achieve success to empower the community. I have no doubt in my mind that given the opportunity she will contribute significantly to the scientific community of your institution. Therefore, considering her previous records and achievements, I strongly recommend her for admission with full financial assistance for the PhD program at **David R. Cheriton School of Computer Science, University of Waterloo**/ **Department of Computer Science, University of Toronto/ Department of Computer Science, University of California, Davis/ Department of Computer Science, University of Texas at Austin**/ **Department of Computer Science, University of British Columbia**.

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