

# Md.Shahidul Islam

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## Research Interests

**Bioinformatics, Machine Learning, Data Mining, Optimization.**

## Education

- 2019–To date **Studying M.Sc. in Computer Science and Engineering.**  
Khulna University, Khulna - 9208
- 2015–2018 **B.Sc. in Computer Science and Engineering.**  
Khulna University, Khulna - 9208  
CGPA: 3.53 out of 4.00
- 2012–2014 **Alim.**  
Tamirul Millat Kamil Madrasah, Dhaka - 1204  
GPA: 5.00 out of 5.00
- 2010–2012 **Dakhil.**  
Sarsina Darussunnat Kamil Madrasah, Perojpur-8521  
GPA: 5.00 out of 5.00

## Working Experiences

- August **Lecturer.**  
2019–To date Faculty of Information and Communications Technology (FICT),  
Villa College, Male'-20373, Maldives
- August **Programmer.**  
2019–To date Center for Information and Communications Technology (CICT),  
Villa College, Male'-20373, Maldives

## B.Sc. Thesis

- Title **RNA Secondary Structure Prediction with Pseudoknots using Chemical Reaction Optimization (CRO).**
- Supervisor **Dr. Md. Rafiqul Islam.**

**Description** This research is focused on the popular optimization problem of RNA secondary structure prediction with pseudoknots which was implemented using a metaheuristic algorithm called Chemical Reaction Optimization (CRO). We have redesigned the basic operators of CRO to solve our problem and also designed a repair operator to increase the performance. The hard tasks during the implementation of the problem were calculating the free energy of the structure by implementing four energy models and maintaining the accuracy of the predicted structure. The results of the RNA structure prediction with pseudoknots problem using CRO algorithm are compared with the related existing algorithms. The results show that the proposed algorithm performs very well in less execution time than other related algorithms..

## Computer skills

**Languages** C, C++, SQL, Java, JavaScript, PHP, Python, C#, ASP.Net, HTML  
**Databases** SQL, MySQL  
**Framework** Laravel  
**Applications** Microsoft Office (Word, Excel, PowerPoint), Latex, Android Studio, Unity, Jupyter Notebook

## Languages

Bangla	<b>Native Speaker</b>	<i>R: Excellent, W: Excellent, S: Excellent, L: Excellent</i>
English	<b>Intermediate</b>	<i>R: Excellent, W: Good, S: Good, L: Excellent</i>
Arabic	<b>Intermediate</b>	<i>R: Excellent, W: Good, S: Null, L: Fair</i>

## Publications

- [1] **Md. Rafiqul Islam, Md. Shahidul Islam, Nazmus Sakeef**, *RNA Secondary Structure Prediction with Pseudoknots using Chemical Reaction Optimization Algorithm*, Early access in IEEE/ACM Transactions on Computational Biology and Bioinformatics, Publisher: IEEE.
- [2] **Md. Shahidul Islam, Sarfaraz Newaz**, *Detection of Safe Angle for Water Vehicles due to Vulnerable Swing*, In Proceedings, 1st International Conference on Advances in Science, Engineering and Robotics Technology (ICASERT 2019), 3-5 May, East West University, Dhaka, Bangladesh, Page: 803-808.

## Awards and Achievements

- 2017 **Champion.**  
 Programming Contest, KU CSE FEST-2017  
**2nd Runner-up.**  
 IT Quiz, KU CSE FEST-2017
- 2016 **Participant.**  
 - National Hackathon 2016 organized by ICT Division  
 - Smart City Hackathon organized by PreneurLab, Grameenphone & Whiteboard
- 2014–2018 **Contestant.**  
 - Participated more than 40 online contests in Codeforces, Codechef & Codemarshal

- Over 110 problems accepted at UVa Online Judge

2014 & 2009 **Scholarship.**

Bangladesh Madrasah Education Board

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## Other Activities

August **General Secretary.**

2017–June Club for Updated Search on Computer (CLUSTER)

2018 CSE Discipline, Khulna University

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## References

Dr. Md. Rafiqul Islam

Professor,

CSE Discipline,

Khulna University, Khulna - 9208.

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Dr. Md. Anisur Rahman

Professor, & Head

CSE Discipline,

Khulna University, Khulna - 9208.

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