

Shanto Rahman

Lecturer • Department of Information and Communication Technology • Bangladesh

University of Professionals

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Education

M.Sc. in Software Engineering

- Institute of Information Technology (IIT), University of Dhaka (DU)
- CGPA: **3.98**
- Academic Rank: **2nd** Position

Dhaka, Bangladesh

Jan. 2015 – Jul. 2016

B.Sc. in Software Engineering

- Institute of Information Technology (IIT), University of Dhaka (DU)
- CGPA: **3.87**
- Academic Rank: **2nd** Position

Dhaka, Bangladesh

Jan. 2011 - Dec. 2014

Research Interest

- Computer Vision (CV)
- Artificial Intelligence (AI)/ Machine Learning/ Deep Learning
- Image Processing
- Software Engineering

Work Experience

Bangladesh University of Professionals (BUP)

Lecturer, Department of Information and Communication Technology (ICT)

Dhaka, Bangladesh

Sept. 2017 to Present

- Conducted Courses:
 - Data Structure & Algorithms
 - Digital Image Processing
 - Artificial Intelligence
 - Distributed System
 - Database Management System
 - Software Engineering
- Undergrad Thesis Supervision:
 - Topic: Computer Vision
 - Number of Students: 4
 - Topic: Software Engineering
 - Number of Students: 2

Samsung R&D Institute Bangladesh Ltd.

Sr. Software Engineer, Advanced Solution Group

Dhaka, Bangladesh

Jul. 2016 to Jul. 2017

- Worked on Fingerprint authentication in MarshMellow.
- Developed Torch for Tizen
- Worked on a project of Sales Force Automation (SFA)
- Used Technology: Java, Android, PHP, MySQL, MAP API, Google API, Tizen

Orion Informatics Ltd.

Software Engineer Intern

Dhaka, Bangladesh

Jan. 2014 to Aug. 2014

- Projects: BBE, HAMDAWIZ
- Used Technology: ASP.NET, Sql Server, AJAX, Javascript, Entity framework

Research Experience

Research Summary [Google Scholar Profile]

Topics:	Image Processing, Computer Vision, Machine Learning, Deep Learning, Software Engineering
Total Articles:	15
Journal Articles:	5
Book Chapter:	1
International Conference Articles:	9
Citations:	204
h-index:	9

Publications [Journal Articles]

- [1] **Shanto Rahman**, Md Mostafijur Rahman, Mohammad Abdullah-Al-Wadud, Golam Dastegir Al Quaderi, and Mohammad Shoyaib. "An adaptive gamma correction for image enhancement." *EURASIP Journal on Image and Video Processing* 2016, no. 1 (2016): 35.
- [2] Md Mostafijur Rahman, **Shanto Rahman**, and Mohammad Shoyaib. "MCCT: a multi-channel complementary census transform for image classification." *Signal, Image and Video Processing* 12, no. 2 (2018): 281-289.
- [3] Md Mostafijur Rahman, **Shanto Rahman**, Rayhanur Rahman, BM Mainul Hossain, and Mohammad Shoyaib. "DTCTH: a discriminative local pattern descriptor for image classification." *EURASIP Journal on Image and Video Processing* 2017, no. 1 (2017): 30.
- [4] Khalid Hussain, **Shanto Rahman**, Md Mostafijur Rahman, Shah Mostafa Khaled, M. Abdullah-Al Wadud, Muhammad Asif Hossain Khan, and Mohammad Shoyaib. "A histogram specification technique for dark image enhancement using a local transformation method." *IPSJ Transactions on Computer Vision and Applications* 10, no. 1 (2018): 3.
- [5] Feroz Mahmud Amil, **Shanto Rahman**, Md Mostafijur Rahman, and Emon Kumar Dey. "Bilateral Histogram Equalization for Contrast Enhancement." *International Journal of Software Innovation (IJSI)* 4, no. 4 (2016): 15-34.

Publications [International Conference Articles]

- [1] **Shanto Rahman**, Md Mostafijur Rahman, Khalid Hussain, Shah Mostafa Khaled, and Mohammad Shoyaib. "Image enhancement in spatial domain: A comprehensive study." In *17th International Conference on Computer and Information Technology (ICCIT)*, pp. 368-373. IEEE, 2014.
- [2] Feroz Mahmud Amil, Md Mostafijur Rahman, **Shanto Rahman**, Emon Kumar Dey, and Mohammad Shoyaib. "Bilateral histogram equalization with pre-processing for contrast enhancement." In *17th IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD)*, Shanghai, China, pp. 231-236. IEEE, 2016.
- [3] SM Sofiqul Islam, **Shanto Rahman**, Md Mostafijur Rahman, Emon Kumar Dey, and Mohammad Shoyaib. "Application of deep learning to computer vision: A comprehensive study." In *5th International Conference on Informatics, Electronics and Vision (ICIEV)*, Dhaka, Bangladesh, pp. 592- 597. IEEE, 2016.
- [4] Md Mostafijur Rahman, **Shanto Rahman**, Minhas Kamal, M. Abdullah-Al-Wadud, Emon Kumar Dey, and Mohammad Shoyaib. "Noise adaptive binary pattern for face image

- analysis.” *In 18th International Conference on Computer and Information Technology (ICCIT)*, Dhaka, Bangladesh, pp. 390-395. IEEE, 2015.
- [5] Khalid Hussain, **Shanto Rahman**, Shah Mostofa Khaled, M. Abdullah-Al-Wadud, and Mohammad Shoyaib. “Dark image enhancement by locally transformed histogram.” *In 8th International Conference on Software, Knowledge, Information Management and Applications (SKIMA)*, pp. 1-7. IEEE, 2014.
- [6] **Shanto Rahman**, and Kazi Sakib. “An Appropriate Method Ranking Approach for Localizing Bugs using Minimized Search Space.” *In 13th International Conference on Evaluation of Novel Approaches to Software Engineering (ENASE)*, pp. 303-309. 2016.
- [7] **Shanto Rahman**, M.M. Rahman, and Kazi Sakib, “A Statement Level Bug Localization Technique using Statement Dependency Graph”. *In 13th International Conference on Evaluation of Novel Approaches to Software Engineering (ENASE)*, (pp. 171-178). 2017
- [8] **Shanto Rahman**, Kishan Kumar Ganguly, and Kazi Sakib. “An improved bug localization using structured information retrieval and version history.” *In 18th International Conference on Computer and Information Technology (ICCIT)*, pp. 190-195. IEEE, 2015.
- [9] Sadia Khan Rupa, Md Faishal Yousuf, and **Shanto Rahman**. "Contrast Enhancement using Mode-Separate Histogram Equalization." *In 1st International Conference on Advances in Science, Engineering and Robotics Technology (ICASERT)*, pp. 1-6. IEEE, 2019.

Publications [Book Chapter]

- [1] **Shanto Rahman**, Rahman Md. Mostafijur, Sakib Kazi, “An Improved Method Level Bug Localization Approach Using Minimized Code Space”, Evaluation of Novel Approaches to Software Engineering, pp. 179-200, Springer, (2016): 703

Skills

Programming Languages	C, C++, MATLAB, Java, Android, .NET, C#, Python, PHP, Assembly, Javascript, SQL
Framework	Laravel 5.0, Codignitor, Entity Framework, ASP.NET, MVC 3, Angular JS, Hadoop
Tools	MATLAB, Netbeans, Eclipse, Visual Studio, Microsoft Visio, Origin Pro, Total commander, L ^A T _E X
Programming Skills	Binary Search, Data Structures, Dynamic-Programming, Basic Graph Theory, Competitive Programming, OOP
Database	Oracle, Sql Server, MySql, SQLite

Extracurricular Activities

- **Competitive Programming**
 - Solved more than 123 UVA problems. [visit]
- **Coach, programming competition**
 - ACM International Collegiate Programming Contest (ICPC)
 - National Girls Programming Contest (NGPC)
 - Inter Private University Programming Contest (IPUPC)
- **Judge, NASA Space Apps Challenge 2019, Dhaka, Bangladesh**

- **Student Advisor, Dept. of Information and Communication Technology (ICT), Bangladesh University of Professionals (BUP), Dec. 2017**
 - Counselling students
 - Student Progress Monitoring
- **Volunteer, at Institute of Information Technology (IIT), University of Dhaka (DU)**
 - Class representative from Jan. 2011 to June 2016
- **Singer**
 - *1st Runner Up*, Bagerhat Child Academy, Bangladesh
- **Gaming**
 - Became *1st Runner up* in Samsung R&D Institute Bangladesh Ltd., playing Carrom in 2016.

Awards

Research Grant	Dhaka, Bangladesh 2019 - 2020
- University Grants Commission of Bangladesh	
Research Grant	Dhaka, Bangladesh 2018 - 2019
- University Grants Commission of Bangladesh	
Research Fellowship, M.Sc.	Dhaka, Bangladesh 2014 - 2015
- Ministry of Information and Communication Technology, Bangladesh	
Best Paper Award, 1st Prize	Dhaka, Bangladesh Dec. 2015
- 18 th International Conference on Computer and Information Technology (ICCIT), IEEE, 2015	
Top Student Merit Award	Dhaka, Bangladesh April. 2016
- Kabi Sufia Kamal Hall, University of Dhaka (DU), Dhaka, Bangladesh	
Merit Scholarship	Dhaka, Bangladesh 2014 - 2015
- Dhaka University Alumni Association, University of Dhaka (DU), Dhaka, Bangladesh	
Merit Scholarship	Dhaka, Bangladesh 2011
- Merkentile Bank Ltd., Bangladesh	
Board Scholarship	Jessore, Bangladesh 2009-2010
- Secondary School Certificate (SSC), Jessore Board, Bangladesh	
Scholarship	Khulna, 2006
- Class Eight, Khulna Division, Bangladesh	

IELTS

- **Overall: 7.0**
 - o Reading: 7.5
 - o Listening: 7.0
 - o Speaking: 7.0
 - o Writing: 6.0

Academic Projects and Documentations

Live Projects

Website: *Department of Disaster Science and Management, University of Dhaka*
 Website: *Shahidullah Hall, University of Dhaka*
 PicEdit : Windows Phone Application

[visit](#)
[visit](#)
[visit](#)

• 3S painter	- This is a desktop application. Features resemble with the Microsoft painting editor.	<i>Dhaka, Bangladesh</i> <i>Jan. 2012 to Jul. 2012</i>
• Employee competence development portal visit	- This project is developed for Grameenphone IT LTD., Bangladesh. Developed using ASP.NET, C#, Entity Framework and SQL Server.	<i>Dhaka, Bangladesh</i> <i>Jan. 2013 to Jun. 2013</i>
• Sologuti	- Sologuti game requires two persons, developed for Android application. The strategy is to get an opponent's guti by crossing over it with yours.	<i>Dhaka, Bangladesh</i> <i>Jul. 2013 to Nov. 2013</i>
• Skin detection visit	- This is a machine learning based application. Here, skins are identified from several pictures. Here, system is trained using skin images and then skin regions are segmented in images. Developed using C programming and OpenCV.	<i>Dhaka, Bangladesh</i> <i>Aug. 2014 to Sept. 2014</i>
• Customized search engine visit	- This project has been done using Lucene and Java EE.	<i>Dhaka, Bangladesh</i> <i>Feb. 2014 to Jun. 2014</i>
• Website: Hostel management, Kabi sufia kamal hall, visit	- This website focuses on the hostel activities of the students such as id card generation, testimonial generation, etc.	<i>Dhaka, Bangladesh</i> <i>Jun. 2014 to Dec. 2014</i>
• Software bug localization (Class level) visit	- In this project based on the bug reports, bugs are identified from the source code. This is an IR based technique, data are taken from Bugzilla	<i>Dhaka, Bangladesh</i> <i>Jan. 2015 to June. 2016</i>

Reference

Dr. Mohammad Shoyaib

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Dr. Kazi Muheymin-Us-Sakib

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Dr. Kazi Abu Taher

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