

# AHMEDUR RAHMAN SHOYON

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Education	<p><b>PhD(Student) - Blazer Graduate Research Fellow</b> (Fall 2021 - Present) Department of Computer Science, University of Alabama at Birmingham (UAB), Birmingham, AL, United States.</p> <p><b>Master of Science in Information Technology(Thesis Group)</b> (2018) Institute of Information Technology, Jahangirnagar University (JU), Bangladesh. CGPA: 3.67 (in the scale of 4.00), research covers 33.33% of total credit.</p> <p><b>Bachelor of Science in Information Technology</b> (2016) Institute of Information Technology, Jahangirnagar University (JU), Bangladesh. CGPA: 3.73 (in the scale of 4.00).</p>
Research Interest	<p><b>High Performance Computing</b> <b>Data Analytics</b> <b>Cloud Computing</b> <b>Software Engineering</b></p>
Bibliometrics	<p>Journal Article: 2, Book Chapter: 1, Workshop Papers: 1, Conference Papers: 4 Citations: 119, h-index: 4 This bibliometric information was retrieved from <a href="#">Google Scholar Profile</a> on 09/14/2022.</p>
Journal Articles	<p>[J2] Darshan Shimoga Chandrashekar, Santhosh Kumar Karthikeyan, Praveen Kumar Korla, Henalben Patel, <b>Ahmedur Rahman Shoyon</b>, Mohammad Athar, George J Netto, Zhaohui S Qin, Sidharth Kumar, Upender Manne, Chad J Crieghton, and Sooryanarayana Varambally, “<b>UALCAN: An update to the integrated cancer data analysis platform</b>”, In: <i>Neoplasia</i>. doi: 10.1016/j.neo.2022.01.001. Impact Factor: 5.71, Q1 Journal.</p> <p>[J1] Md Whaiduzzaman, Md. Razon Hossain, <b>Ahmedur Rahman Shoyon</b>, Shanto Roy, Aron Laszka, Rajkumar Buyya, and Alistair Barros, “<b>A Privacy-preserving Mobile and Fog Computing Framework to Trace and Prevent COVID-19 Community Transmission</b>”, In: <i>IEEE Journal of Biomedical and Health Informatics (J-BHI)</i>. doi: 10.1109/JBHI.2020.3026060. Impact Factor: 5.22, Q1 Journal.</p>
Book Chapters	<p>[B1] <b>Ahmedur Rahman Shoyon</b>, Shanto Roy, Tanusree Sharma, and Md. Whaiduzzaman, “<b>A RESTful E-Governance Application Framework for People Identity Verification in Cloud</b>”, In: <i>Luo M., Zhang L.J. (eds) Cloud Computing – CLOUD 2018. Lecture Notes in Computer Science, vol 10967. Springer, Cham.</i> <a href="https://doi.org/10.1007/978-3-319-94295-7_19">https://doi.org/10.1007/978-3-319-94295-7_19</a>.</p>
Workshop Papers	<p>[W1 (Accepted)], <b>Ahmedur Rahman Shoyon</b>, Landon Richard Dyken, Oded Green, Thomas Gilray, and Sidharth Kumar, “<b>Accelerating Datalog applications with cuDF</b>”, In: <i>2022 IEEE/ACM 12th Workshop on Irregular Applications: Architectures and Algorithms (IA3)</i>, Dallas, TX in conjunction with SC22.</p>

<b>Conference Papers</b>	<p>[C4], Md Whaiduzzaman, Alistair Barros, <b>Ahmedur Rahman Shovon</b>, Md Razon Hossain, and Colin Fidge, “<b>A Resilient Fog-IoT Framework for Seamless Microservice Execution</b>”, In: <i>IEEE International Conference on Services Computing (SCC) - 2021</i>, pp. 213-221. doi: 10.1109/SCC53864.2021.00034</p> <p>[C3], Md Shahriare Satu, Md Khalilur Rahman, Maksud Alam Rony, <b>Ahmedur Rahman Shovon</b>, Md Jane Alam Adnan, Koushik Chandra Howlader, and M Shamim Kaiser, “<b>COVID-19: Update, Forecast and Assistant-An Interactive Web Portal to Provide Real-Time Information and Forecast COVID-19 Cases in Bangladesh</b>”, In: <i>International Conference on Information and Communication Technology for Sustainable Development (ICICT4SD) - 2021</i>, pp. 456-460. doi: 10.1109/ICICT4SD50815.2021.9396786</p> <p>[C2] <b>Ahmedur Rahman Shovon</b>, Shanto Roy, Arnab Kumar Shil, and Tanjila Atik, “<b>GDPR Compliance: Implementation Use Cases for User Data Privacy in News Media Industry</b>”, In: <i>International Conference on Advances in Science, Engineering and Robotics Technology (ICASERT) - 2019</i>, pp. 1-6. doi: 10.1109/ICASERT.2019.8934660</p> <p>[C1] Shanto Roy, <b>Ahmedur Rahman Shovon</b> and Md. Whaiduzzaman, “<b>Combined approach of Tokenization and Mining to secure and optimize Big Data in Cloud Storage</b>”, In: <i>IEEE R10 Humanitarian Technology Conference (R10-HTC) - 2017</i>, pp. 83-88. doi: 10.1109/R10-HTC.2017.8288912</p>
<b>Reviewer Recognition</b>	<p><b>Journal: Sustainable Cities and Society (SCS)</b>  <i>Impact Factor: 7.587</i>, Publisher: Elsevier.</p>
<b>Research Experience</b>	<p>08/2021 - Present: <b>University of Alabama at Birmingham, AL, United States.</b>  <i>Research Fellow</i>, High-performance Automated Reasoning and Programming Lab(HARP). Demonstrated the feasibility of a high-performance relational algebra backend for a subset of Datalog applications leveraging GPU parallelism [W1].  Developed a visualization tool to create Kaplan Meier survival probability graph for cancer data analysis [J2].  Developed a topological data analysis pipeline to apply persistent homology on brain networks resting state fMRI data [under review].</p> <p>01/2016 - 12/2018: <b>IIT, Jahangirnagar University, Dhaka, Bangladesh.</b>  <i>Research Assistant</i>, Mobile Cloud Computing and Big Data Research Group(MCCBD). Developed RESTful E-Governance application framework for identity verification using deep learning in cloud [B1].  Applied combined approach of tokenization and mining to secure and optimize Big Data in cloud storage [C1].</p>
<b>Teaching Experience</b>	<p>01/2016 - 12/2016: <b>IIT, Jahangirnagar University, Dhaka, Bangladesh.</b>  <i>Teaching Assistant</i>, Operating System Lab.</p>
<b>Academic Awards and Honors</b>	<p>2021: Blazer Graduate Research Fellowship in the Computer Science department at the University of Alabama at Birmingham  2016-2017: National Science and Technology (NST) Fellowship, Ministry of Science and Technology, Bangladesh for Masters Research  2011-2015: University Merit Scholarships at undergraduate level  2011: National Merit Scholarship for Higher Secondary Certificate examination  2010: Champion in higher secondary category at Bangladesh Mathematical Olympiad</p>

<b>Technical Skills</b>	<b>Advanced:</b> Python, JavaScript, Git, HTML, CSS. <b>Intermediate:</b> C++, CUDA, Java, SQL, JIRA, PHP, AWS, LaTeX. <b>Basic:</b> NoSQL, Bash, MPI, GCP, Openshift, Subversion. <b>CI/CD:</b> Docker, Github actions, Travis CI.	
<b>Professional Experience</b>	06/2019 - 08/2021: <b>ICT Division, Government of Bangladesh.</b> <i>Assistant Programmer</i> , Department of Information & Communication Technology. I contributed to the development of e-Governance and e-Services solutions. As a field-level officer of the ICT Division, I served directly to achieve Smart Cities and Communities to attain Sustainable Development Goals (SDG).  12/2017 - 06/2019: <b>Cefalo Bangladesh Ltd.</b> <i>Software Engineer</i> , NHST Global Team. Our team developed and maintained five publications of this Norwegian media conglomerate. We followed agile methodologies to carry out the tasks in a disciplined manner. I used Python (Django, Django REST Framework), JavaScript (React, jQuery) to develop the web applications, and CI/CD tools(Github Actions, Pipelines) to automate the application deployment process.	
<b>Achievements</b>	<b>Participant @ Argonne GPU Hackathon 2022</b> 07/2022 Benchmarked transitive closure computation, nested loop join on ThetaGPU.	
	<b>1st @ Hackerrank Python and Security domain</b> 07/2016 Solved all Python and Security domain challenges at Hackerrank..	
	<b>7th @ IEEEExtreme Programming Competition 9.0</b> 10/2015 Achieved 7 <sup>th</sup> position out of 2,477 teams, Team: <i>JUJITCoders</i> .	
	<b>1st @ Intra University Programming Contest, JU</b> 08/2015 Achieved 1 <sup>st</sup> position in <i>Intra University Programming Contest, JU, 2015</i> .	
<b>Community Contributions</b>	<b>Volunteer @ The World Games 2022, Birmingham, USA</b> 07/2022 Served as a volunteer for International World Games Association (IWGA).	
	<b>Judge @ Spring 2022 Research Expo, UAB</b> 04/2022 Served as a judge under Service Learning and Undergraduate Research, UAB.	
	<b>Judge @ Fall 2021 Research Expo, UAB</b> 11/2021 Served as a judge under Service Learning and Undergraduate Research, UAB.	
	<b>Webmaster @ IEEE Student Branch, JU</b> 05/2015 - 10/2016 I was responsible for development and maintenance of IEEE SB, JU website.	
	<b>Top 1% contributor @ Stack Overflow</b> Username: <i>arsho</i> Gained 12000+ reputation in <i>StackOverflow</i> where developers learn and build careers.	
	<b>Contribution @ Github</b> Username: <i>arsho</i> Contributor and maintainer of several popular open source projects in <i>Github</i> .	
	<b>Contribution @ PyPI</b> Username: <i>arsho</i> Developed <i>Bangla</i> , <i>AutoLike</i> , <i>Opener</i> , and <i>CopyUSB</i> Python PyPI indexed packages.	