

S M Rayeed

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Summary

PhD student in Computer Science at RPI. Focused on leveraging advanced Machine Learning techniques to drive breakthroughs in neuroimaging.

Education

Aug. 2023 – Present	Doctor of Philosophy in Computer Science Rensselaer Polytechnic Institute, Troy, New York, US Research Domain : <i>Federated Learning, Neuroimaging, Image Analysis</i> Advisor : <i>Dr. Stacy Patterson</i> (Google Scholar , Email)	Ongoing
Jan. 2017 – Mar. 2021	Bachelor of Science in Computer Science and Engineering Islamic University of Technology (IUT), Dhaka, Bangladesh Thesis : <i>Bangla Sign Language (BdSL) Dataset Generation using Depth Information</i>	CGPA : 3.76 out of 4.00 (<i>First class with Honors</i>) Thesis Repository

Experience in Academia

Aug. 2023 – Present	Graduate Teaching Assistant (GTA) , Department of Computer Science School of Science, Rensselaer Polytechnic Institute, Troy, New York, USA - GTA Courses : <i>CSCI 1100 (Computer Science I)</i> - Instructor(s) : <i>Dr. Uzma Mushtaque</i> (Scholar , Email)	<i>Office hours : Fri 4 pm - 6 pm</i> <i>Lab hours : Wed 10 am - 2 pm</i> <i>Virtual Meeting : link</i> <i>Course website : here</i>
Apr. 2021 – Jul. 2023	Researcher , <i>Systems and Software Lab</i> , Dept. of Computer Science and Engineering Islamic University of Technology (IUT), Dhaka, Bangladesh - Coordinator(s) : <i>Dr. Md. Kamrul Hasan</i> (Email) and <i>Dr. Hasan Mahmud</i> (Email) - Area of work : <i>Depth information in Sign Language Recognition</i> - Conference paper : 01 Journal article : 01 Research grant : 01	

Publications

Mar. 2022	Bangla sign digits recognition using depth information. doi: 10.1117/12.2623400
Oct. 2022	BdSL47 dataset, published on <i>Harvard Dataverse</i> . doi: 10.7910/DVN/EPIC3H
Under Review	BdSL47: A complete open-access depth-based Bangla sign alphabet and digit dataset (Link)

Industrial Experience

Jan. 2023 – Present	Software Quality Assurance Engineer - Automation using Playwright, Cypress Project Management	Nilavo Technologies Ltd Dhaka, Bangladesh
Mar. 2021 – Dec. 2022	Junior Test Engineer - Automation using Cypress API Testing Security Testing using BurpSuite	Nilavo Technologies Ltd Dhaka, Bangladesh
Nov. 2019 – Jan. 2020	Software Quality Assurance Intern - Automation using Selenium Manual Testing	Nilavo Technologies Ltd Dhaka, Bangladesh

Technical Skills

- Programming Languages : C, C++, Java, Python	- Web Development : HTML, CSS, JS, Bootstrap, jQuery, PHP
- ML Tools : TensorFlow, Keras, PyTorch, Scikit-learn, Seaborn	- Image Processing : OpenCV, Pillow, SciPy, PIL, Haar Cascade, Caffe
- Database Management : SQL, PL/SQL, PostgreSQL, MySQL	- Modeling Languages : MiniZinc, PDDL
- Automation Tools : Cypress, Playwright, Selenium	- Security Testing Tools : BurpSuite, OWASP ZAP (Zed Attack Proxy)
- Tracking Tools : Jira, Trello	- Graphics and Engineering Drawing : Blender, AutoCAD

Selected Projects

more projects are available on : github.com/SMRayeed

Aug. 2020 – Sept. 2020	Brain Tumor Detection using CNN (<i>Keras, TensorFlow</i>) - Deep Learning project for brain tumor detection from MRI images	Link
Jul. 2019 – Aug. 2019	Online Pharmacy Management System (<i>HTML, CSS, JavaScript</i>) - Web-development project for online medicine purchase and management	Link
Sept. 2020 – Oct. 2020	Online Result Processing System (<i>PLSQL</i>) - Systems to automate the results of all the students in a class	Link

Sept. 2019 – Oct. 2019	Disaster Loss Management (MiniZinc) - AI project based on optimization problem to minimize natural disaster loss and maximize relief material supply in a post-disaster scenario	Link
Jun. 2020 – Jul. 2020	Comparison among classifiers on Parkinson's diseases dataset (Keras, TensorFlow) - Machine Learning project to compare classifiers on Parkinson's diseases	Link
Feb. 2021 – Mar. 2021	Website Automation Project (Cypress, JavaScript) - Automating basic functionalities of an online shopping website	Link

Standardized Test Scores

Sept. 2022	Graduate Record Examination (GRE) : 332 out of 340 - Verbal : 162/170 Quant : 170/170 AWA : 4.0/6.0	Reg. Number : 1203897
Nov. 2021	International English Language Testing System (IELTS) : 8.0 out of 9.0 - Listening : 8.5 Reading : 8.5 Writing : 7.5 Speaking : 7.0	TRF Number : 21BD016026RAYS050A

Awards and Achievements

Jun. 2022	UIU (United International University) Research Grant Institute for Advanced Research (IAR), United International University, Bangladesh - Project Title : Generating Bangla sign alphabet dataset using depth information - Grant Reference : <i>UIU-IAR-01-2022-SE-37</i>
Dec. 2009 – Feb. 2014	Math Olympiads – (Organizer : Bangladesh Math Olympiad Committee) - Feb. 2014 : 1st Runner-up – Secondary Level, National Event - Dec. 2013 : 1st Runner-up – Secondary Level, Regional Event - Feb. 2010 : 1st Runner-up – Primary Level, National Event - Dec. 2009 : Champion – Primary Level, Regional Event
Mar. 2014	Divisional Science Olympiad – (Organizer : Bangladesh Academy of Sciences) - 3rd Position – Secondary Level, Regional Event
Jan. 2014	National Literature Olympiad – (Organizer : HSBC Prothom Alo) - 2nd Runners-up – Secondary Level, National Event
2009 – 2020	Public Examination Scholarships – (Awarded by : Government of Bangladesh) - 2017-2020 : Higher Secondary Certificate Scholarship – Dhaka Education Board - 2015-2016 : Secondary School Certificate Scholarship – Dhaka Education Board - 2012-2014 : Junior School Certificate Scholarship – Dhaka Education Board - 2009-2011 : Primary School Certificate Scholarship – Dhaka Education Board

Extra-Curricular Activities

Apr. 2019 – Mar. 2021	Assistant General Secretary (Logistics) – IUT Computer Society - Organized 10th ICT Fest 2020 Supervised workshops, seminars, and visits for projects and coursework at IUT
Apr. 2017 – Mar. 2019	Executive Member – IUT Computer Society - Organized 9th ICT Fest 2017 Organized workshops, seminars, and visits for projects and coursework at IUT
Jul. 2014 – Jun. 2016	General Secretary (Design and Logistics) – Notre Dame Nature Study Club, Notre Dame College - Initiated and organized events, visits for projects, and competitions at secondary school
Oct. 2015	Inauguration Speaker and Team Lead (Design and Logistics), 6th National Nature Summit - Organized by : Notre Dame Nature Study Club, Notre Dame College
Jan. 2015	Organizer (Design and Logistics), Green Inspiration 2015 – 1st International Nature Summit - Organized by : Notre Dame Nature Study Club, Notre Dame College
Mar. 2014	Attendee, Math Camp for 55th International Math Olympiad (IMO) 2014, Cape Town, South Africa - Organized by : Bangladesh Math Olympiad Committee

References

Dr. Md Kamrul Hasan Professor, CSE Department Islamic University of Technology Email : hasank@iut-dhaka.edu	Dr. Hasan Mahmud Associate Professor, CSE Department Islamic University of Technology Email : hasan@iut-dhaka.edu	Mr. Sharif Rahman Chief Software Architect, Biscom Westford, Massachusetts, USA Email : srahman@biscom.com
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