

# Rajan Saha Raju

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RESEARCH INTEREST	Artificial Intelligence, Natural Language Processing, Bioinformatics	
EDUCATION	<b>B.Sc. in Computer Science &amp; Engineering</b> Shahjalal University of Science and Technology, Bangladesh <ul style="list-style-type: none"><li>Graduated with a CGPA of 3.81 with <b>Distinction</b> on a scale of 4.00</li></ul>	2016 - 2020
EMPLOYMENT HISTORY	<b>Head of R&amp;D Team</b> Infancy IT	July 2022 - Present
	<b>Bioinformatician</b> Child Health Research Foundation <ul style="list-style-type: none"><li>Built a pipeline for analyzing Nanopore sequencing data</li><li>Responsible for maintaining the Bangladesh Nextstrain version of SARS-CoV-2</li><li>Responsible for investigating the prevalence of phage defense systems in bacterial species</li><li>Explored various Pyocin types, a class of Bacteriocin produced by <i>Pseudomonas aeruginosa</i></li></ul>	July 2021 - June 2022
	<b>Junior Software Engineer</b> REVE Systems <ul style="list-style-type: none"><li>Developed a web-based data annotation platform to build text corpora</li><li>Responsible for designing crawler to collect data from client's social platform</li></ul>	June 2020 - May 2021
	<b>Programming Trainer</b> Border Guard Public School & College, Sylhet <ul style="list-style-type: none"><li>Responsible for preparing students who aimed to compete in the National High School Programming Contest</li></ul>	Jan 2019 - Dec 2019
JOURNAL PUBLICATIONS	<ul style="list-style-type: none"><li>[1] Hooda, Y., Islam, S., Kabiraj, R., Rahman, H., Sarkar, H., Da Silva, K. E., Raju, R. S., Luby, S. P., Andrews, J. R., Saha, S. K., &amp; Saha, S., "Old tools, new applications: Use of environmental bacteriophages for typhoid surveillance and evaluating vaccine impact," <i>PLoS Neglected Tropical Diseases</i>, 2024.</li><li>[2] R. Alotaibi, M. O. Alassafi, Md. S. I. Bhuiyan, R. S. Raju, &amp; S. Ferdous. "A Reinforcement-Learning-Based model for resilient load balancing in hyperledger fabric." <i>Processes</i>, 2022.</li><li>[3] R. S. Raju, A. A. Nahid, P. C. Dev, and R. Islam. "VirusTaxo: Taxonomic classification of viruses from the genome sequence using k-mer enrichment." <i>Genomics</i>, 2022.</li><li>[4] R. Islam, R. S. Raju, N. Tasnim, I. H. Shihab, M. A. Bhuiyan, Y. Araf, &amp; T. Islam. "Choice of assemblers has a critical impact on de novo assembly of SARS-CoV-2 genome and characterizing variants." <i>Briefings in Bioinformatics</i>, 2021.</li></ul>	
CONFERENCE PUBLICATIONS	<ul style="list-style-type: none"><li>[5] R. S. Raju, P. Bhattacharjee, A. Ahmad, &amp; Md. S. Rahman. "A Bangla Text-to-Speech System using Deep Neural Networks." <i>International Conference on Bangla Speech and Language Processing (ICBSLP)</i>, 2019.</li><li>[6] P. Bhattacharjee, R. S. Raju, A. Ahmad, and Md. S. Rahman. "End-to-End Bangla Speech Synthesis." <i>International Conference on Science &amp; Contemporary Technologies (ICSCT)</i>, 2021.</li></ul>	

**TECHNICAL SKILL Programming Languages:**

Python3, R, C++, Shell, Java, PHP

**AI Technologies:**

LLM, RAG (Retrieval-Augmented Generation), Text Embedding, OCR

**Databases & DataFrame:**

MySQL, Qdrant (Vector DB), MongoDB, Pandas

**Web Frameworks:**

FastAPI, Laravel

**Developer Tools:**

Git, Docker

**Operating Systems & Networking:**

Linux (Ubuntu, CentOS), macOS, Wireguard VPN server

**HONOURS**

- Champion at AI For Bangla Competition - 2.0 (National Level), 2023
- 1st Runner Up at National Undergraduate Sylhet Region Math Olympiad, 2019
- Honorable Mention, ACM ICPC Dhaka Regional Programming Contest, 2018
- Honorable Mention, National Collegiate Programming Contest (NCPC), 2017
- Stood 7th position at National Undergraduate Sylhet Region Math Olympiad, 2016
- Recipient of Prime Minister Medal at National Creative Talent Hunt on Math and Computer, 2014