

OFM Riaz Rahman Aranya

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PROFESSIONAL SUMMARY

Software Engineer with 2.5 years of industry experience in full-stack development and solution architecture. Currently pursuing a Ph.D. in Computer Science, specializing in medical image segmentation and data-efficient deep learning. My research focuses on advancing AI-driven healthcare solutions, combining hands-on expertise in software development with strong foundations in data-centric machine learning and applied research.

TECHNICAL SKILLS

Languages: Python, Ruby, Java, C, C++

Web Technologies: Ruby on Rails(MVC), jQuery, HTML, JavaScript, Bootstrap, CSS, SCSS

Database Systems: SQL, MySQL

Data Science & Machine Learning: PyTorch, Tensorflow

DevOps & Version Control: Docker, Git

Tools: Jupyter Notebook, PyCharm, Spyder, RubyMine, CodeBlocks, VS Code, Visual Studio, JMeter, Unity

Others : Data Modeling, Agile (Scrum), Design Patterns, Debugging, Root Cause Analysis

JOB EXPERIENCE

Graduate Teaching Assistant | *The University of Texas at San Antonio*

Aug 2023 – Present

- Course Instructor

- CS 2113 - Fundamentals of Object-Oriented Programming (Fall 2025)

- CS 3443 - Application Programming (Fall 2024)

- Teaching Assistant / Grader

- CS 4843 - Cloud Computing (Summer 2025, Spring 2025)

- CS 3853 - Computer Architecture (Summer 2024)

- CS 3443 - Application Programming (Spring 2024)

- CS 2233 - Discrete Math Structures (Fall 2023)

Software Engineer | *RedDot Digital Ltd*

Mar 2023 – Jul 2023

- Designed solution architecture and develop APIs

Jr. Software Engineer | *Nascenia Ltd*

Dec 2020 – Feb 2023

- Worked as a full-stack developer, completed multiple projects.

- Designed solution architecture

- Mentored juniors.

ICT Instructor | *Oxygen Academy*

2018 – 2020

- Taught fundamentals of C programming, HTML, and databases.

- Delivered topic-specific lectures.

- Conducted and evaluated exams.

- Provided feedback and academic guidance.

EDUCATION

The University of Texas at San Antonio **PhD in Computer Science[Expected Grad: 2028]** | GPA : 4.00 *Aug 2023 – Present*

Khulna University of Engineering & technology **BSc in Computer Science and Engineering** | GPA : 3.28 *Mar 2016 – Mar 2020*

PROJECTS

Recommendation System | *Tools: Ruby on Rails, JavaScript, JQuery, MySQL*

2021-2022

- Developed multiple features and fix bugs in the application.

- Built APIs and test performance of APIs using JMeter.

- Optimizing the performance to support many users simultaneously.

Company Digitization 2022 | *Tools: Ruby on Rails, JavaScript, JQuery, MySQL*

2022

- Developed multiple features in the application

- Contribute to design system architecture.

Online Collaboration 2022 | *Tools: Ruby on Rails, JavaScript, JQuery, MySQL*

2022

- Online collaboration is a platform where different companies' employees can ask and answer questions. There is a voting system for every question and answer. Users gain points by getting up-vote, down-vote, and accepted answers to their questions and answers. There are blog sections where users can post any blog and comment. The owner of the post can set those posts' visibility status.

- Complete application is developed by single-handedly.

Ninja Runner (Game) 2020 | *Tools: Unity3D, C#*

2020

- An endless runner run avoiding collisions with obstacle and collect points for each successful passing of obstacle.

- A Smart Voice Control Wheel Chair** | Tools: Raspberry Pi, Python 2018
- A smart wheel chair which is controlled by human voice through smartphone. Here human voice is converted to text by using a smartphone application. The application sends text data to Raspberry PI which is attached to wheelchair for controlling the movement.
 - This project got 1st runner up position in a national project showcasing (LICT project showcasing 2019)
- Student Contact Information Application (APK)** | Tools: Android Studio 2017
- An Android application of contact information of a class of students with multiple features like calling and connecting to their social IDs.

RESEARCH & PUBLICATIONS

C=Conference, J=Journal, S=In Submission

- [C.1]** S. Das, **O. F. M. R. Aranya** and N. N. Labiba, "Brain Tumor Classification Using Convolutional Neural Network," 2019 1st International Conference on Advances in Science, Engineering and Robotics Technology (ICASERT), Dhaka, Bangladesh, 2019, pp. 1-5, doi: 10.1109/ICASERT.2019.8934603.
- [J.1]** Prottoy Saha, Muhammad Sheikh Sadi, **O.F.M. Riaz Rahman Aranya**, Sadia Jahan, Ferdib-Al Islam, COV-VGX: An automated COVID-19 detection system using X-ray images and transfer learning, Informatics in Medicine Unlocked, Volume 26, 2021, 100741, ISSN 2352-9148, <https://doi.org/10.1016/j.imu.2021.100741>.
- [S.1]** **OFM Riaz Rahman Aranya**, Kevin Desai. (2025). "SRA-Seg: Synthetic to Real Alignment for Semi-Supervised Medical Image Segmentation." Manuscript submitted for publication in *ICPR 2026*.
- [J.2]** Amirhossein Bagherian, **OFM Riaz Rahman Aranya**, Allison Kosub, et al. (2025). "Comprehensive Benchmarking of Deep Learning Approaches for Automated Astrocyte Segmentation in Traumatic Brain Injury." Manuscript accepted for publication in *Journal of Neuropathology and Experimental Neurology*. DOI: 10.1093/jnen/nlaf114

LEADERSHIP EXPERIENCE

- Bangladesh Student Association at UTSA** | San Antonio, USA 2024-2025
- Treasurer (2024 2025)
- Jashore Association of KUET** | Khulna, Bangladesh 2018-2020
- Vice President (2019 2020)
 - General Secretary (2018 2019)
- HACK - Hardware Acceleration Club of KUET** | Khulna, Bangladesh 2024-2025
- General Secretary (2019 - 2020)
- Dream (Voluntary Blood Donation Society of KUET)** | Khulna, Bangladesh 2017-2020
- Assistant General Secretary (2019 2020)
 - Assistant Publicity Secretary (2018 2019)
 - Member (2017 2018)
- OKS - Organization of KUET Sports** | Khulna, Bangladesh 2018-2020
- Executive Member (2019 2020)
 - Participated in Inter University Athletes Badminton Tournament-2020 at Rajshahi University as a representative of KUET athletes' team

HONORS AND AWARDS

- One published articles was linked to the United Nations Sustainable Development Goals (**SDG 3: Ensure healthy lives and promote well-being for all at all ages**), helping to tackle some of the world's greatest challenges.
- **1st Runner Up** in LICIT Project Showcasing Jashore IT park, 2019
- **Board Scholarship** (General) form Jashore Board, 2015
- **Champion** on High Jump KUET, 2020
- **Champion** on High Jump KUET, 2019
- **2nd Runner up** on Long Jump KUET, 2019
- **2nd Runner up** on Hoff Step and Jump KUET, 2017
- **Runner up** Inter Batch Football Tournament, 2016
- **Champion** Intra Batch Football Tournament, 2017

PROFESSIONAL MEMBERSHIPS

- IEEE**, Membership ID: 99988407 June 2024 - Present

CERTIFICATIONS

- Programming for Everybody (Getting Started with Python) 2020
- Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning 2020
- Convolutional Neural Networks in TensorFlow 2020