Muhammad Samee Sevas

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Education

The University of Texas at Arlington — August 2025 - Present
Ph.D. in Computer Science

Military Institute of Science and Technology (MIST) — February 2020 - April 2024
B.Sc. in Computer Science and Engineering — ***GPA: 3.90/4.00*** *(WES Evaluation)*

English Proficiency

IELTS — November 2024
Listening: 8.5, Reading: 7.5, Writing: 6.5, Speaking: 6.5 — ***Band Score: 7.5***

Publications

Refereed Journals:

1. **Muhammad Samee Sevas**, Nusrat Sharmin, Chowdhury Farjana Tur Santona, Saidur Rahaman Sagor. "Advanced ensemble machine-learning and explainable ai with hybridized clustering for solar irradiation prediction in Bangladesh." Theoretical and Applied Climatology (2024)
2. Shejuti Binte Feroz, Nusrat Sharmin, **Muhammad Samee Sevas**. "An empirical analysis of hyperparameter tuning impact on ensemble machine learning algorithm for earthquake damage prediction." Asian Journal of Civil Engineering (2024)
3. Chowdhury Farjana Tur Santona, Nusrat Sharmin, **Muhammad Samee Sevas**, Rubaiyet Islam, Saidur Rahman Sagor. "An Empirical Analysis of Explainable Artificial Intelligence Based on Feature Importance in Solar Irradiance Prediction." (Under Review)

Peer-reviewed Conference Publications:

1. **Muhammad Samee Sevas**, Chowdhury Farjana Tur Santona, Nusrat Sharmin. "Ensemble machine-learning model for solar radiation prediction using explainable AI." 2023 14th International Conference on Computing Communication and Networking Technologies (ICCCNT), Delhi, India, 2023
2. Shejuti Binte Feroz, **Muhammad Samee Sevas**, Nusrat Sharmin, Arindam Chatterjee. "Performance analysis of machine learning and deep learning architecture for earthquake magnitude prediction." 2023 IEEE 9th International Women in Engineering (WIE) Conference on Electrical and Computer Engineering (WIECON-ECE), Thiruvananthapuram, India, 2023
3. **Muhammad Samee Sevas**, Chowdhury Farjana Tur Santona, Nusrat Sharmin. "Solar Radiation Forecasting using Deep Learning Techniques: Enlightening Solar Energy Future of Bangladesh." 2024 International Conference on Recent Progresses in Science, Engineering and Technology (ICRPSET)

Professional Experience

Software Engineer — February 2024 - August 2025
Samsung Research and Development Institute Bangladesh — *Dhaka, Bangladesh*

- Worked on the "Health Provider" project-
  - Implemented health features, including metrics like stress, sleep, SpO2, heart rate for Galaxy Fit3, and Ring.
  - Developed new features and fix bugs on the "Galaxy Wearable" Android app.
  - Collaborated with Samsung HQ (South Korea) in developing Samsung's first smart ring, the "Galaxy Ring".
- Contributing to research and innovation-
  - Filled two patents in Samsung.
  - Developed PoCs (Proof of Concept) for AI and UWB (Ultra-Wideband)-related solutions.

Instructor — May 2021 - April 2024
MIST Computer Club — *Dhaka, Bangladesh*

- Took C, C++, Python, Data Structures & Algorithms programming classes for over 100 students.

- Problem setter of various programming contests arranged by MCC.
- Organized multiple programming and technical events.

Intern January 2023 - February 2023
Brain Station 23 *Dhaka, Bangladesh*

- Worked on identifying privacy risks for digital payment apps.
- Mapped the app's privacy policy to GDPR-related keywords and calculated privacy risk scores.

Notable Projects

1. **Pedestrian Intention Prediction in Autonomous Vehicles**
   We use YOLO to detect pedestrians and track their position, speed, and body pose. This data is then given to a Qwen LLM, which analyzes patterns to predict the pedestrian's next action, like crossing the street or waiting.
   Technology: YOLO, Qwen(LLM).

2. **Galaxy Ring**
   Galaxy Ring is Samsung's first smart ring, offering health and fitness tracking with a sleek design. It monitors sleep, heart rate, and workouts, with data syncing to the Samsung Health app for insights powered by Galaxy AI.
   Technology: RTOS, Java, Android.

3. **Galaxy Fit3 Plugin**
   The Galaxy Fit 3 is Samsung's latest fitness tracker, featuring a sleek aluminum design, 13-day battery life, and water resistance. It offers over 100 workout modes, health monitoring, and seamless function control, making it a stylish and reliable companion for a healthy lifestyle.
   Technology: Java, Kotlin, Android.

4. **Jononi: An Intelligent Assistive System for Expecting Mothers (Capstone Project)**
   Jononi reduces expecting mothers' pregnancy problems by calculating BMI, monitoring medical data, providing dietary suggestions, and sending emergency alerts when complications are detected.
   Technology: Raspberry Pi, Android, Firebase, Machine Learning. **[Code], [Video]**

Technical Skills

Programming Languages: Python, C/C++, Java, Kotlin, Matlab, Assembly (Intel ×86)
Scripting & Markup: LATEX, HTML, JavaScript, Shell Script, ER Diagram
Libraries: Scikit-Learn, Keras, TensorFlow, Pandas, PyTorch, NumPy, Matplotlib
Frameworks: Android
Tools: Git, Google Colab, Visual Studio, Eclipse, Netbeans, Codeblocks, Android Studio, Blender, Proteus
Database: MySQL, Oracle, Firebase
OS: Linux, Windows, Raspbian, RTOS
Embedded Systems: Arduino Microcontrollers, Raspberry Pi

Programming Experience

- **Champion** in Independence Day Programming Contest 2023. [**ref**], [**News Link**]
- **27th** in ICPC (International Collegiate Programming Contest) Asia West Continent Final Contest 2022 (Bangladesh Rank: **5th**). [**ref**], [**News Link**]
- **16th** in ICPC Asia Dhaka Regional Contest 2022 **(Top 7%)**. [**ref**]
- **15th** in Synapse Year End Contest 2021 **(Top 5%)**.
- **Champion** in Intra MIST Junior Programming Contest (CodeWar-2020) and won the title **"MIST Best Junior Programmer-2020". [News Link]**
- Participated in over **20** onsite programming contests and more than **300** online programming contests. [**ref**]
- Solved over **2,500** problems in different online judges. [**ref1**], [**ref2**]

Awards & Honors

- Placed in the **MIST Dean's List 2020, 2021, 2022**.
- Awarded a **University Merit Scholarship** for graduating **Magna Cum Laude**.
- Passed **Samsung SW Certificate Test** and earned Software Professional Certification. [**ref**]
- Received Samsung Mobile R&D CTO Award. [**ref**]
- Received Samsung Team of the Year 2024 Award. [**ref**]
- Secured **1st place** in the basic division of the CAMA Informatics Contest 2023. [**ref**]
- **Top 8%** in Google Farewell Contest. [**ref**]
- Progressed to Round 2 of the Meta Hacker Cup **2021**, **2022**, **2023 (Top 10%)**.
- **Top 10%** in Google Kick Start 2022. [**ref**]

Extra-curricular Activities

- Vice President at MIST Drama and Film Society (March 2023 – February 2024). [**ref**]
- Judge and Problem Setter in MIST Intra Department Girls' Programming Contest. [**ref**]
- Participated in **BUET**, **SUST**, **RUET** Inter University Programming Contest.
- Participated in MIST LeetCon 2023 HackMeIfYouCan. [**ref**]
- Executive Director at MIST Drama and Film Society (March 2022 – February 2023). [**ref**]
- Participated in the 12th National Undergraduate Mathematics Olympiad 2021. [**ref**]
- Volunteered in National Collegiate Programming Competition (NCPC) 2020. [**ref**]

Conference Presentation

- Presented Extended Abstract at IEEE CS BDC Summer Symposium 2023, Kushtia, Bangladesh.
  Title: AI-based Solar Energy Framework: explainable AI for solar energy generation and GNN for optimal location identification in Bangladesh. [**ref**]
- Presented Extended Abstract at IEEE CS BDC Summer Symposium 2023, Kushtia, Bangladesh.
  Title: Optimal solar panel location finding using capacitated facility location problem. [**ref**]
- Presented Paper at 14th International Conference on Computing Communication and Networking Technologies (ICCCNT) 2023, Delhi, India.
  Title: Ensemble machine-learning model for solar radiation prediction using explainable AI. [**ref**]
- Presented Paper at IEEE 9th International Women in Engineering (WIE) Conference on Electrical and Computer Engineering (WIECON-ECE) 2023, Thiruvananthapuram, India.
  Title: Performance analysis of machine learning and deep learning architecture for earthquake magnitude prediction. [**ref**]