

Sarmistha Sarna Gomasta

CONTACT INFORMATION	sgomasta@umass.edu	https://ron352.github.io/ https://www.linkedin.com/in/sarmistha-sarna/
RESEARCH INTEREST	Time-Series ML, Self-Supervised Learning Imputation, Biosensors, Health, Statistical Signal Processing, Ubiquitous Computing, Edge Intelligence.	
EDUCATION	MS/PhD , Computer Science University of Massachusetts Amherst CGPA: 3.93/4.0 Advisor: Dr. Prashant Shenoy M.Sc. , Computer Science and Engineering Jahangirnagar University CGPA: 3.98/4.00 (Rank: 2/65) Thesis Dissertation: <i>Collaborately: Blockchain Based Resource Sharing Platform for Training and Validation of Machine Learning Models.</i> B.Sc. , Computer Science and Engineering Jahangirnagar University CGPA: 3.82/4.00 (Rank: 1/65) Thesis Dissertation: <i>PharmaChain: Blockchain-based Drug Supply Chain Provenance Verification System</i>	Sep'23 – Sep'29 Aug'22 – Aug'23 Mar'18 – June'22
RESEARCH EXPERIENCE	Research Intern <i>STMicroelectronics, CA</i> <i>Advised by:</i> Mahesh Chowdhary, Swapnil Sayan Saha Developed an on-sensor real-time, context-aware ergonomic interventions. Research Assistant in LASS Lab <i>University of Massachusetts Amherst (CICS)</i> <i>Advised by:</i> Dr. Prashant Shenoy Developing advanced sensing systems for multimodal and multitask learning, with applications in digital health and signal processing.	June'25 – August'25 Sep'24 – Present
	Research Intern <i>STMicroelectronics, CA</i> <i>Advised by:</i> Mahesh Chowdhary, Swapnil Sayan Saha Developed an on-sensor sleep monitoring framework using a vertical analog front end with a machine learning core.	June'24 – Aug. 2024
	Research Assistant in HCI-VIS Lab <i>University of Massachusetts Amherst (CICS)</i> <i>Advised by:</i> Dr. Narges Mahyar Conducted qualitative and quantitative studies to evaluate the impact of music on data visualization, focusing on developing intelligent, user-centered visualizations.	Sep'23 – Mar'24
	Undergraduate Research Assistant <i>JU Data Mining Group</i> <i>Advised by:</i> Dr. Musfique Anwar, Dr. Iqbal H. Sarker Designed a temporal activity-biased weight model to rank influential users on social media.	Dec'19 – June'22

PUBLICATIONS

(* denotes equal contribution)

[C1] ErgoAware: Fusing Physical and Cognitive Signals for Real-Time Ergonomic Awareness. Sarmistha Sarna Gomasta et al. (Under Submission).

[C2] Vertical analog frontend with machine learning core for on-sensor sleep stage monitoring. Sarmistha Sarna Gomasta, Swapnil Sayan Saha, Krishna Palle, and Mahesh Chowdhary. Published in the 2025 IEEE BioSensors Conference (BioSensors), San Diego, CA, USA.

[C3] Vision: Preventing Tech-related Physiological Health Issues using Commodity Wearables. Bhawana Chhaglani, Sarmistha Sarna Gomasta, Prashant Shenoy. Published in the HumanSys'25, Irvine, California, USA. [[Arxiv Preprint](#)]

[C4] AlgoCert: Adopt Non-transferable NFT for the Issuance and Verification of Educational Certificates using Algorand Blockchain. Tahilil Tahilil, Sarmistha Sarna Gomasta. Published in the 9th proceedings of the Asia-Pacific Conference on Computer Science and Data Engineering, Gold Coast, Australia (CSDE-2022). [[Paper](#)]

[C5] Attribute-driven Topical Influential Users Detection in Online Social Network. Aditi Dhali, Sarmistha Sarna Gomasta, Md. Musfique Anwar. Published in the Asia-Pacific Conference on Computer Science and Data Engineering proceedings, Gold Coast, Australia (CSDE-2020). [[Paper](#)]

[J1] PharmaChain: Blockchain-based Drug Supply Chain Provenance Verification System. Sarmistha Sarna Gomasta, Aditi Dhali, Tahilil, Md. Musfique Anwar, A B M Shawkat Ali. Published in the proceedings of **Heliyon**, Elsevier. [[Paper](#)]

[P1] Leveraging Translation for Optimal Recall: Tailoring LLM Personalization With User Profiles. Sarmistha Sarna Gomasta*, Karthik Ravichandran*. [[Arxiv Preprint](#)]

[P2] FeatureSense: Preventing Speaker Leakage through Privacy-aware Feature-based Audio Sensing. Bhawana Chhaglani, Sarmistha Sarna Gomasta, Yuvraj Agarwal, Jeremy Gummesson, Prashant Shenoy. [[Arxiv Preprint](#)]

PATENT APPLICATIONS

[P1.] **STMicroelectronics Classified Patent**. Swapnil Sayan Saha, Sarmistha Sarna Gomasta, and Krishna Chaitanya Palle Hayagreeva. "Sleep Monitoring using Vertical Analog Frontend and Motion Sensors." Filed.

AWARDS AND SCHOLARSHIPS

IEEE Signal Processing Society Fellowship (IEEE SPS) 2025
Awarded the **IEEE SPS Fellowship (7000)** for three years to facilitate my research.

Google CSRMP Scholar 2023 2023
Awarded the **Google CS Research Mentorship** for 12 weeks under the supervision of Dr. Siyan Zhao.

NST Fellowship 2022 2022
Awarded **\$600** (top 0.1%) to facilitate the B.Sc. dissertation.

JU Dean's List 2017 – 2022

Awarded scholarships for academic excellence among 420 students.

NSDA 2021

2021

National Finalist in the Cloud Computing category at the Bangabandhu National Skills Competition.

GWOC 2021

2021

Ranked in the top 10% out of 8000+ participants in Machine Learning & Data Science categories of GirlScript Winter of Contributing 2021.

Ada Lovelace Datathon 2021

2021

Ranked 6th place in the Ada Lovelace Datathon hosted by HerWill.

Facebook Hackathon: Messaging 2020

2020

Participated in the Facebook Hackathon: Messaging 2020.

International Student Week Ilmenau (ISWI) 2019

2019

Awarded a fellowship among 2000+ candidates from 75 countries to attend International Student Week Ilmenau, Germany.

IWCVIS 2019

2019

Received the Best Poster Paper award at the International Workshop on Computer Vision and Intelligent Systems.

Hult Prize 2019

2019

Ranked 10th place out of 50 teams in the Hult Prize at Jahangirnagar University.

National Girls Programming Contest (NGPC) 2018

2018

Ranked in the top 9% out of 105+ teams in the National Girls Programming Contest 2018.

TEACHING
EXPERIENCE

Teaching Assistant, CICS 571: Data Visualization , Spring 2025

Instructor: Hamza Elhamdadi

Teaching Assistant, CICS 160: Object-Oriented Programming, Fall 2024

Instructor: Jaime Davila

Teaching Assistant, CICS 110: Foundations of Programming, Fall 2023 – Spring 2024

Instructors: Prof. Cole Adam Reilly, Prof. Joe Chiu

Lecturer, Daffodil International University, Dec 2022 – June 2023

Courses: Numerical Analysis, Software Requirement Analysis, Algorithm

ACTIVITIES &
SERVICES

Artifact Evaluation Committee Member, MobiSys'25

May'25 – June'25

URV Mentor, Umass Amherst

June'25 – August'25

PhD Grad Reps, Umass Amherst

Feb'24 – Present

PhD Peer Mentor Program, Umass Amherst

Sept'24 – Present

PhD Social Chair, GradCS at UMass Amherst

Feb'24 – Present

Mentor, CARE PhD Applicant Support Program

Oct'23 – Dec'23