

Sarmistha Sarna Gomasta

CONTACT INFORMATION	sgomasta@umass.edu https://ron352.github.io/ https://www.linkedin.com/in/sarmistha-sarna/
RESEARCH INTEREST	Multimodal Learning, Statistical Signal Processing, Ubiquitous Computing, Privacy Preserving Machine Learning, and Digital Health.
EDUCATION	MS/PhD , Computer Science University of Massachusetts Amherst Sep'23 – Sep'2028 CGPA: 4.0/4.0 Advisor: Dr. Prashant Shenoy B.Sc. , Computer Science and Engineering Jahangirnagar University Mar'17 – June'22 CGPA: 3.82/4.00 (Rank: 1/65) Thesis Dissertation: <i>PharmaChain: Blockchain-based Drug Supply Chain Provenance Verification System</i>
RESEARCH EXPERIENCE	Research Assistant in LASS Lab Aug'24 – Present <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. Research Intern June'24 – Aug. 2024 <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. Research Assistant in HCI-VIS Lab Aug'23 – Mar'24 <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. Research Assistant Oct'21 – Sep'22 <i>The University of Fiji</i> <i>Advised by:</i> Dr. A B M Shawkat Ali Designed a novel framework using Hyperledger Fabric to improve the drug traceability system and prevent counterfeit pharmaceuticals. Undergraduate Research Assistant Dec'19 – June'22 <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.
PUBLICATIONS	(* denotes equal contribution)

[C1] **Vertical Analog Frontend with Machine Learning Core for On-Sensor Sleep Stage Monitoring.**

Sarmistha Sarna Gomasta et al. (Under Submission).

[C2] **FeatureSense: Preventing Speaker Leakage through Privacy-aware Feature-based Audio Sensing.** (Under Submission).

[C3] **Investigating How Music Affects Persuasion, Engagement, and Emotion in Data Videos.**

Sarmistha Sarna Gomasta et al. (Under Submission).

[C4] **AlgoCert: Adopt Non-transferable NFT for the Issuance and Verification of Educational Certificates using Algorand Blockchain.**

Tahlil Tahlil, 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, Tahlil, 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.**

Karthik Ravichandran*, Sarmistha Sarna Gomasta*. [[Arxiv Preprint](#)]

PATENT
APPLICATIONS

[P1.] **STMICROELECTRONICS Classified Patent.** Swapnil Sayan Saha, Sarmistha Sarna Gomasta, and Krishna Chaitanya Pale Hayagreeva. "Sleep Monitoring using Vertical Analog Frontend and Motion Sensors." Filing date: November 2024.

AWARDS AND
SCHOLARSHIPS

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	PhD Grad Reps, Umass Amherst	Feb'24 – Present
	PhD Social Chair, GradCS at UMass Amherst	Feb'24 – Present
	Mentor, CARE PhD Applicant Support Program	Oct'23 – Dec'23
	Reviewer, Publons	July'22 – Aug'23
	Assistant Program Secretary, JU Computer Club	July'18 – July'19