Sari Sadiya, PhD

Website: sari-saba-sadiya.github.io
GitHub: sari-saba-sadiya
Google Scholar

Email : sari.sadiya@gmail.com
ORCID: 0009-0005-7482-3274
Mobile : +1-517-899-0101

Autobiography

R2 researcher at Goethe University. I have a dual PhD in Computer Science and Cognitive Neurocience. Previously, I worked in VLSI at Apple Inc. and studied Mathematics and Computer Science at the Technion. My main research interests are computational neuroscience, bioinformatics, and computer vision.
Beside research, I am a project director at an education nonprofit, and moonlight as a cellist.

Experience

- **Frankfurt Institute for Advanced Studies at Goethe Universität** Frankfurt am Main, Germany
  - **Postdoctoral Fellow**: Research at the intersection of computer vision and computational neuroscience.
  - **Course Instructor**: Goethe University Frankfurt, Pattern Analysis and Machine Intelligence Seminar.
  - **Thesis Supervisor**: Supervised multiple Bachalor and Master theses
- **Machine Learning Consultant**
  - **Aneesi.ai (2023)**: (pre-seed) Designed and implemented an LLM based personalized b2b marketing system. The company went on to acquire pre-seed funding.
    Tech stack: React, Flask, Python, Firestore, Weaviate, SQL, Google Cloud Functions.
  - **GamerTag (2023)**: (post series-A) Helped implement an embedding-based recommender system.
    Tech stack: Python, Zilliz, AWS
- **Michigan State University** East Lansing, MI
  - **Course Instructor**: Independent Study Project (Spring 2019)
  - **Teaching Assistant (2019-2020)**: Introduction to Programming, Introduction to AI.
  - **Research Assistant (2015-2018)**: Human robot interaction and multi-modal task learning from demonstration. Funded by the DARPA SIMPLEX and XAI programs.
- **Apple Inc.** Matam Center, Haifa, Israel
  VLSI Engineer Mar. 2013 - Aug. 2015
- **Technion - Israeli Institute for Technology.** Haifa, 3200003, Israel
  - **CS Industrial Project**: Technion / IBM joint industrial project - Anomaly detection in time series data
  - **Mathematics Research**: Collaborated on various applied mathematics projects, including *"Stable Marriage Problems"* and *"Andronov Hopf bifurcations"*

Technical Skills

- **Machine Learning**: PyTorch, Sklearn, Numpy, Pandas, OpenCV, Slurm, Matlab
- **Full Stack Development**: VueJS, Bootstrap, PWA, Flask, C++
- **Cloud Applications**: MongoDB, Cloud Firestore, Weaviate, AWS, Docker, GCF
- **Experimental Psychology**: Matlab MGL, PsychoPy, SPSS
- **Hardware**: Verilog and System Verilog Assertions

Education

- **Dual PhD in Cognitive Neuroscience and Computer Science** Michigan State University
  Academic advisers Dr. Taosheng Liu (PSY) and Dr. Mohammad Ghassemi (CSE) *Aug. 2017 – Dec. 2022*
- **MSc Computer Science (Sponsored by the Fulbright program)** Michigan State University
  Focus on Natural Language Processing, Academic adviser Dr. Joyce Chai *Aug. 2015 – May. 2017*
- **BSc Mathematics** Technion - Israel Institute of Technology
  Final equivalent to DE 1.3 *Dec. 2009 – Apr. 2013*
- **BSc Computer Science** Technion - Israel Institute of Technology
  Final equivalent to DE 1.3 *Dec. 2009 – Apr. 2013*

Languages

- **Arabic**: Native
- **Hebrew**: Native
- **English**: High Level of writing, reading, and speaking abilities (107 Toefl iBT Score).
- **German**: Elementary Level

Selected Publications

My research is at the intersection of Machine Learning and Cognitive Neuroscience, with emphasis on interpretability. Full list at Google Scholar. Joint first authorship is marked by *.

- 2023: K. Dwivedi, **S. Sadiya**, M. Balode, G. Roig, R. Cichy; *Visual features are processed before navigational affordances in the human brain*
  Nature Scientific Reports
- 2023: T. Ettling*, **S. Sadiya***, G. Roig; *Different Algorithms (Might) Uncover Different Patterns: A Brain-Age Prediction Case Study*
  In Proceedings of the 2023 IEEE International Conference on Bioinformatics and Biomedicine (BIBM)
- 2022: **S. Sadiya**, T. Alhanai, M. Ghassemi; *Feature Imitating Networks*
  In Proceedings of the 2022 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)
- 2021: **S. Sadiya**, T. Alhanai, M. Ghassemi; *Artifact Detection and Correction in EEG data: A Review*
  In Proceedings of the 2021 IEEE International Conference on Neural Engineering (NER).
- 2020: **S. Sadiya**, T. Alhanai, T. Liu, M. Ghassemi; *Unsupervised EEG Artifact Detection and Correction.*
  In Frontiers in Digital Health. Volume 2.
- 2020: **S. Sadiya**, T. Alhanai, T. Liu, M. Ghassemi; *EEG Channel Interpolation Using Deep Encoder-decoder Networks.*
  In Proceedings of the IEEE International Conference on Bioinformatics and Biomedicine (BIBM).
- 2018: H. Karimi, PC. Roy, **S. Sadiya**, J. Tang; *Multi-Source Multi-Class Fake News Detection.*
  The 27th International Conference on Computational Linguistics (COLING).
- 2018: S. Yang, **S. Sadiya**, Q. Gao, Y. Chai; *Commonsense Action Explanation in Human-Agent Communication.*
  In Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP).

Distinctions

- **Dissertation Completion Fellowship** 2021
  Support for Students completing their dissertation, from the Graduate School at MSU. Total value: 5,416$
- **Cultural Heritage Informatics Fellowship** 2020
  Researching digital methods and computational approaches for cultural heritage. Total value: 4,000$
- **Graduate Office Fellowship** 2020
  Awarded to graduate students as a summer assistantship. Total value: 6,942$
- **Fulbright Scholarship program for international educational exchange** 2015 – 2017
  Full Scholarship, Granted by the U.S. Bureau of Educational and Cultural Affairs. Total value: 30,000$
- **Dean Honour List, Technion - Israeli Institute for Technology.** 2013
  Academic Award Given to top 10% of students in program

Invited Talks and Workshops

- **Cutting Gardens 2023**: S. Sadiya, D. Bersch, G. Roig
  Net2Brain: Unraveling cognitive functionality as captured by EEG using pre-trained artificial neural networks
- **Conference on Cognitive Computational Neuroscience 2023**: S. Sadiya, A. Gifford, M. Vilas
  Algonauts Hackathon

Additional Experience

Project director for the Refugee Outreach Collective *Global Classroom* project, a partnership with universities and colleges in Michigan which expands educational access to individuals experiencing displacement at Malawi Dzelaka refugee camp through participation in accredited online classes.