

SAIROOP BODEPUDI

sairoop@gatech.edu | +1 (470) 929-3255 | [LinkedIn](#)

Education

Georgia Institute of Technology, USA

Master of Science in Computer Science

August 2022 - Present

GPA: 4.0/4.0

- COURSES : Artificial intelligence, interactive robot learning, personal health informatics

Indian Institute of Technology (IIT) Palakkad, India

Bachelor of Technology in Computer Science and Engineering

July 2018 - May 2022

CGPA: 9.38/10

Work Experience

Georgia Institute of Technology

August 2022 - Present

- Serve as a graduate teaching assistant for the CS 7641 MACHINE LEARNING course under Prof. Charles Isbell.
- Guide students in interpretation of course subject matter, assisting in the preparation of learning materials, and grading papers.

ETH Zürich, Switzerland

April 2021 - October 2021

- Worked with Prof. Mrinmaya Sachan on AN IMPROVED CASE BASED REASONING SYSTEM FOR KNOWLEDGE GRAPHS which involved using case based reasoning systems and graph attention networks for the Knowledge Base (KB) completion task.
- Improved model performance and calibration by nearly **10 times** on path based methods using selective prediction and temperature scaling.

Projects

Beamforming in ultrasound imaging using graph neural networks

August 2021 - May 2022

- Worked with Prof. Mahesh R Panicker (IIT PALAKKAD, INDIA) & Prof. Abhilash H (UNIVERSITY OF ALBERTA, CANADA) for creating efficient beamforming algorithms important in medical ultrasound imaging and diagnostics.
- Modelled the relationships between different sensors using graphs and their importance using entropy and graph attention networks.

Meet.me : Remote collaborative workplace application

August 2021 - December 2021

- Built the summary logic module for the Meet.me application to summarize the chats and prioritize content for discussion analytics using natural language processing techniques such as lemmatization, stemming (Porter Stemmer), etc. [\[Github\]](#)

Patch based neural network transformation for ultrasound imaging

January 2021 - May 2021

- Constructed a deep learning based algorithm for approximation of the best image construction pipeline (MVDR i.e Minimum Variance Distortionless Response) using the most efficient Delay and Sum pipeline (parallelizable on a GPU).
- Full paper available at <https://arxiv.org/abs/2110.10220>

Computer vision tools for evaluating compliance of COVID protocols

May 2020 - July 2020

- Built an end-to-end application for face mask detection algorithm having **3 times** reduced inference time and **5 times** reduced memory requirements, along with the extension of OpenPose to evaluate the safety during the COVID-19 pandemic.

Technical Skills

Natural language processing: Transformers, Seq2Seq models, knowledge graph representation and reasoning methods.

Medical imaging: Deep learning for medical imaging and diagnostics, beamforming in ultrasound imaging.

Computer vision: Object detection, pose estimation, and model pruning.

Programming languages: Java, C, C++, Python, C#, SML.

Extracurricular activities

Club Mentor: Mentor in the Data Analytics Club at IIT Palakkad.

Class representative : For the Computer Science and Engineering batch of 2018 at IIT Palakkad.

Social Service : Volunteered for cleaning villages and towns as part of the National Service Scheme (NSS).