# Sudarshan Anand

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## EDUCATION

## Georgia Institute of Technology

Atlanta, GA

MS. Computational Science and Engineering (CGPA: 4.0/4.0)

Aug. 2024 - present

Birla Institute of Technology and Science (BITS Pilani)

Rajasthan, India

MSc. Mathematics and B.E. Computer Science (CGPA: 9.4/10)

Aug. 2019 - Aug. 2024

EXPERIENCE

## Qure.ai Technologies Pvt. Ltd., Bangalore

Jan. 2024 – Jun. 2024

AI Scientist Intern

Karnataka, India

- Developed vision models to classify lung nodule textures from chest CT scans, improving malignancy risk assessment.
- Enhanced AI annotations, achieving a ≈45% improvement in correlation with ground truth.
- Benchmarked image registration speed for lung nodule tracking in consecutive scans.

## National Center For Polar and Ocean Research, Goa

May. 2021 - Jul. 2021

Data Science Intern

Goa. India

• Built ensemble ML models for weather forecasting with 99.52% accuracy using polar time-series data.

Skills

Machine Learning & Math: Deep Learning, Graph Neural Networks, Explainable AI, Computer Vision, Healthcare AI, Data Science, Statistics, Graph theory, Time-series Forecasting, Foundational Models.

Software: Pytorch, Lightning, MONAI, MongoDB, PostgreSQL, PowerBI, Pinecone, Neo4j, Alteryx Publications

- Anshu, Balram Dubey, Sourav Kumar Sasmal, and Sudarshan Anand. Consequences of fear effect and prey refuge on the Turing patterns in a delayed predator-prey system. Chaos: An Interdisciplinary Journal of Nonlinear Science, volume 32, page 123132. AIP Publishing LLC, Dec 2022 (DOI: 10.1063/5.0126782).
- Shiksha, Sudarshan Anand, Krishnendra Shekhawat, and Karan Agrawal. 2025. "Automated Generation of Circulations within a Floorplan." Artificial Intelligence for Engineering Design, Analysis and Manufacturing 39: e9. (DOI: 10.1017/S0890060425000022.

## Projects (more details)

## Responsible AI for Medical Imaging and Diagnosis

Jan. 2025 – present Atlanta, United States

Georgia Institute of Technology

• Working in the Responsible AI for Decision Making in Healthcare and Engineering team.

#### Samay: Time-series Foundational Models Library

Jan. 2025 – present

Georgia Institute of Technology

Atlanta, United States

- Working at AdityaLab, Georgia Tech, contributing to making Samay an open-source time-series library.
- Benchmarking LPTM against other SOTA Time-series foundational models (Chronos, TimesFM, MOIRAI, etc).

## Viral evolution in heterogeneous human contact networks Project website

Oct. 2024 – Dec 2024

Georgia Institute of Technology

Atlanta. United States

• Studied how heterogeneous human contact patterns and competition among mutated strains affect the disease dynamics.

## Fluctuations in queueing systems

Sept. 2024 – Dec 2024

Georgia Institute of Technology

Atlanta, United States

- Formulated mathematical model for multiclass queueing systems using stochastic differential equations to analyze their stability (will the queue eventually empty or grow infinitely?).
- Analyzed stability of Lu-Kumar and a modified version of the same.

## Automated generation of Circulations with a Rectangular floorplan

Aug. 2021 – Aug 2024

Birla Institute of Technology and Science, Pilani

Rajasthan, India

- · Led the R&D team involved in adding corridors to floorplans with the power of graph algorithms.
- Project turned stealth-mode startup GPLAN.

#### Volunteering and Leadership

#### Creative Activities Club, the art club of BITS Pilani

May. 2021 - Jul. 2022

Sep. 2020 – Dec. 2020

Club Secretary

Core member

• Led and mentored 50-member art club in organizing three events for the college's annual technical fest.

# Student Faculty Council - Mathematics Department, BITS Pilani

Rajasthan, India

Rajasthan, India

• Represented the student body to the department faculty to get the students' queries and issues resolved.

#### Sri Annai Kamakshi Kalai Kudam, Chennai

Jun. 2013 – present

Tamil Nadu, India • Member of art center that trains and helps artists like me to make artworks and display them in art galleries.

• Funds collected from selling these artworks during the art exhibition are donated to educate underprivileged kids.