

Adarsh Kappiyath

PHD STUDENT

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Education

University of Surrey

PHD

- Robustness at Scale for Neural Networks.

Surrey, UK

Feb 2024 - present

Indian Institute of Space Science and Technology(IIST)

M.TECH IN MACHINE LEARNING AND COMPUTING

- CGPA: 8.39/10.00

Kerala, India

July 2017 - May 2019

Amrita School of Engineering

B.TECH IN ELECTRICAL AND ELECTRONICS ENGINEERING

- CGPA: 8.53/10.00

Kerala, India

August 2012 - May 2016

P.E.S Vidyalaya

HIGHER SECONDARY

- 88%

Kerala, India

June 2010 - May 2012

Publications

CONFERENCE PROCEEDINGS

- A. Kappiyath**, A. Chaudhuri, A. Jaiswal, Z. Liu, Y. Li, X. Zhu, and L. Y. 1. "SEBRA : Debiasing through Self-Guided Bias Ranking". In: *ICLR*. 2025.
- A. Kappiyath**, A. GARG, R. Hebbalaguppe, and P. AP. "Lifelong Learning in StyleGAN through Latent Subspaces". In: *TMLR* (2025).
- S. V. Sreelatha*, **A. Kappiyath***, A. Chaudhuri, and A. Dutta. "DeNetDM: Debiasing by Network Depth Modulation". In: *NeuRIPS*. 2024.
- A. Kappiyath***, S. V. Sreelatha*, and S. Sumitra. "Self-Supervised Enhancement of Latent Discovery in GANs". In: *AAAI* (2022).
- A. Kappiyath***, V. S. Silpa*, and S. S. "Disentanglement-based Active Learning". In: *IJCNN*. 2021.

Work Experience

TCS Research

PRE-DOCTORAL FELLOW

- Adaptable Latent subspace learning for StyleGAN without forgetting**: We propose a generative continual learning scheme for one of the most popular generative models, namely, the StyleGAN. Many studies have shown that the latent space of a StyleGAN is very versatile in that it can 'embed' data from distributions out of its training. In this paper, we propose to leverage this property to learn to sample from a stream of datasets, facilitating lifelong learning without forgetting. Specifically, given a StyleGAN trained on a base task, we propose to learn a set of dictionary vectors on its latent space, one each for a novel unseen task (or dataset).

New Delhi, India

May. 2022 - Jan 2024

Flytxt Mobile Solutions

DEPUTY MANAGER (DATA SCIENTIST), R&D

- Prototyped a Knowledge Graph embedding model for vectorizing the product catalogue of our clients.
- Responsible for productization of Explainable AI feature in our SaaS product **Robo-X**.
- Developed Multivariate Adaptive Testing for faster identification of winning variant with minimal opportunity loss.
- Responsible for design, development, and deployment of machine learning pipeline for Campaign optimization model used in **Robo-X**.
- Implemented several API micro-services using Flask.

Kerala, India

Jun. 2019 - April 2022

Scholastic Achievements

- Secured a position within the top 5% and 10% in the National Level proctored exam on Advanced Deep Learning and Deep Learning conducted by NPTEL.
- Finalist in Microsoft AI Challenge 2018.

- Winner of circuit design competition conducted by ELYZIA(Electrical and Electronics Club of Amrita School of Engineering).
- 1st runner up in Mars Rover Design Competition conducted at Amrita School of Engineering.
- Qualified for the finals of National Level Hybrid vehicle design competition EFFI CYCLE.

Scholarships

- Post Graduate (PG) Scholarship Scheme (2017-2019) offered by Ministry of Human Resource Development.
- Post Graduate Research (PG) Fellowship offered by the Faculty of Engineering and Physical Sciences.

Relevant Courses

- Linear Algebra
- Probability and Statistics
- Pattern Recognition and Machine Learning
- Optimization Techniques
- Deep Learning

Other Projects

- Answer selection using Deep Learning Techniques: Given a question and a set of candidate answers, this project aims to identify the candidate that answers the question correctly. Various methods such as a Siamese network using CNNs, Siamese network with attention, compare—aggregate architecture along with various word embedding algorithms were implemented and evaluated. This project was done as part of the Microsoft AI Challenge 2018.
- Fast Charger for Lead Acid Battery: In this project, we developed a fast-charging circuit for lead batteries with due consideration to battery health monitored via temperature change of the battery.

Skills

Programming Languages

Python

Operating Systems

Ubuntu, Windows

Packages/Technologies/Frameworks

PyTorch, Weights & Biases, Scikit-learn, LaTeX, Hyperopt, PyCharm.

References

- **Dr. Lu Yin**, Assistant Professor, School of Computer Science and Electronic Engineering, University of Surrey, UK. [Website](#)
- **Dr. Xiatian Zhu**, Senior Lecturer in Artificial Intelligence (AI), Centre for Vision, Speech and Signal Processing (CVSSP), University of Surrey, UK. [Website](#)
- **Dr. Prathosh A.P**, Assistant Professor, Department of Electrical Communication Engineering, Indian Institute of Science (IISc), Bengaluru, India. [Website](#)