

Anirudh Sundara Rajan

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Education

2022 – present **University of Wisconsin-Madison**, Madison, WI, United States

Master's in Computer Sciences, CGPA: 3.781/4.0

2018 – 2022 **Birla Institute of Technology and Sciences, Pilani**, Pilani, Rajasthan, India

B.E. in Electronics and Communication Engineering, CGPA: 8.447/10

Research Experience

Jan 2023 – Now **University of Wisconsin-Madison**, *Research Assistant*, Madison, WI, United States.

Advised by Prof. Yong Jae Lee, conducted a comprehensive and in-depth study on Knowledge Distillation where we observed and analyzed the transfer of implicit knowledge. Work accepted to NeurIPS 2023. Currently studying image generation with an emphasis on Diffusion models.

June 2021 – May 2022 **The Artificial Intelligence Institute of South Carolina.**, *Research Intern*, Columbia, SC, United States.

Under the guidance of Dr. Amit Sheth, worked on using Knowledge Infused learning to cluster cooking representations. Work published in the Frontiers journal. Also worked on constructing a vast biomedical knowledge graph from various knowledge bases and combining them into a single knowledge graph.

Publications

NeurIPS 2023 Utkarsh Ojha*, Yuheng Li*, **Anirudh Sundara Rajan***, Yingyu Liang, Yong Jae Lee. 2023. What Knowledge Gets Distilled in Knowledge Distillation?. In Annual Conference on Neural Information Processing Systems (NeurIPS 2023).

Frontiers in Big Data 2023 Revathy Venkataramanan, Swati Padhee, Saini Rohan Rao, Ronak Kaoshik, **Anirudh Sundara Rajan**, Amit Sheth. 2023. Ki-Cook: clustering multimodal cooking representations through knowledge-infused learning. In the Journal, Frontiers in Big Data (Volume 6)

* indicates equal contribution.

Teaching Experience

- Aug 2023 – **COMP SCI 839 — Learning Based Image Synthesis**, *Teaching Assistant*, UW-Now Madison.
Working as a Teaching Assistant in the graduate level course, on image generation taught by Prof. Yong Jae Lee.
- Jan 2023 – **COMP SCI 220 — Data Science Programming I**, *Teaching Assistant*, UW-May 2023 Madison.
Worked as a Teaching Assistant in the undergraduate level course, about the fundamentals of Python for data science, taught by Prof. Michael Doescher.
- Jun 2022 – **COMP SCI 220 — Programming I**, *Teaching Assistant*, UW-Madison.
Dec 2022 Worked as a Teaching Assistant in the undergraduate level course, on the basics of programming with Java, taught by Prof. Jim Williams.

Projects

- Jan 2023 – **Contextual Representations for fine-grained Emotion Classification**, UW-May 2023 Madison.
Analyzed the performance of large language models such as BERT, RoBERTa etc on fine-grained emotion detection on the GoEmotions dataset. Leveraged ChatGPT to provide additional supervision. Further details available [here](#).
- Jan 2021 – **E-commerce application on Android**, BITS Pilani.
May 2021 Built an Android e-Commerce application with industry level functionalities including multiple user types and product types. Developed using Java and XML. Further details available [here](#).
- July 2020 – **COVID-19 research article analysis**, BITS Pilani.
Jan 2021 Clustering the abstracts of research articles via K-Means algorithm and optimising them further through a Genetic Algorithm for further study. Under the guidance of Dr.Lov Kumar.
- May 2020 – **Named Entity Recognition using Neural Machine Translation**, ScoVelo
July 2020 Consulting.
Trained an bi-LSTM based Neural Machine Translation model to perform Named Entity Recognition on product codes of Adhesive products. Further details available [here](#).

Graduate Coursework (University of Wisconsin-Madison)

- MATH 632 Introduction to Stochastic Processes
- CS 726 Non-Linear Optimization
- CS 577 Introduction to Algorithms
- CS 769 Advanced Natural Language Processing
- CS 839 Learning Based Image Synthesis
- CS 760 Machine Learning

Undergraduate Coursework (BITS Pilani)

- MATH F111 Mathematics I: Vector Calculus

MATH F112 Mathematics II: Linear Algebra
MATH F113 Probability and Statistics
MATH F211 Mathematics III: Differential Equations
CS F213 Object Oriented Programming
ECE F344 Information Theory and Coding

Skills

Programming Java, C, C++, Python (proficient in PyTorch)
Database Neo4j, SQL
Management

Language English (fluent), Tamil (native)