

Anirudh Dagar

MACHINE LEARNING · OPEN SOURCE

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Education

Indian Institute of Technology Roorkee

INTEGRATED M.TECH IN GEOLOGICAL TECHNOLOGY

- Cumulative Grade Point Average, CGPA: 8.25/10

Roorkee, India

July. 2016 - Jun. 2021

Publications

ProteinGCN: Protein model quality assessment using Graph Convolutional Networks [Paper] 📄

Sanyal, S. and Anishchenko, I. and **Dagar, A.** and Baker, D. and Talukdar, P.

Indian Institute of Science, University of Washington, IIT Roorkee

Preprint

Apr. 2020

[link](#)

In-context learning with iterative demonstration selection

Qin C, Zhang A, **Dagar, A.**, Ye W.

Amazon Web Services

Preprint

July. 2023

[link](#)

Experience

Amazon Web Services, AI

APPLIED SCIENTIST

- Leading development for AutoGluon-Assistant: Zero LoC AutoML
- Maintainer & Contributor at AutoGluon: SoTA AutoML library [Open Source] 📄
- Competing in Kaggle AutoML Grand Prix 2024 with AutoGluon-Assistant
- Maintainer at Dive Into Deep Learning. (20k+ Github Stars) 🌟🌟
- PyTorch & JAX Framework Adaptation Author: Dive Into Deep Learning. [Open Source]

Berlin, Germany

Sep. 2021 - Present

SciPy

OPEN SOURCE DEVELOPER

- Contributor since July 2021. My contributions 📄

Remote

Jul. 2021 - Present

Quansight Labs

SOFTWARE DEVELOPMENT INTERN [SLIDES] [DEMO] [BLOG]

- Worked on the Data API Standardization 📄
- Work done on improving array libraries interoperability. (SciPy | PyTorch | NumPy | CuPy)
- Contributions to SciPy 📄 PyTorch 📄

Remote

Jun. 2021 - Sep. 2021

CERN

GOOGLE SUMMER OF CODE [OFFICIAL RELEASE] [BLOG]

- Contributing to TMVA, a machine learning environment integrated into the ROOT scientific software framework for HEP.
- Development of TMVA PyTorch Interface.
- Mentor in GSoC 2021. Student in GSoC 2020.

Remote

May. 2020 - Aug. 2021

Amazon Web Services, AI

MACHINE LEARNING INTERN

- Port MXNet code into PyTorch for the book Dive Into Deep Learning by Aston Jhang et al.
- Development of the MLA course "Graph Machine Learning" for MLU.
- Worked on GNNs for Heterogeneous Graphs with Deep Graph Library.

Seattle

Oct. 2020 - Jan. 2021

Vernacular.ai

MACHINE LEARNING INTERN

- Built a **Bad Audio Detection** model to reject noisy inscrutable audios.
- Built a Seq2Seq Resegmentation module for **D-Vector + Clustering** prediction outputs in the **Diarization** pipeline.
- Generated Simulated Mixture Dataset for Diarization.

Bangalore, India

May. 2020 - Jul. 2020

ProteinGCN, MALL Lab (Prof. Partha P. Talukdar)

RESEARCH INTERNSHIP [LINK]

- Introduced ProteinGCN, a novel method for Protein Model Quality Assessment using **GCNs**.

IISc Bangalore, India

May. 2019 - Apr. 2020

- Built a pipeline to use TIME ML based TIME BANK Dataset for Temporal Relation Classification.
- Implemented (GCN+biLSTM) for classification on TB Dense Dataset.

Projects

GitHub Tracker

DEVELOPER

Roorkee

Mar. 2021

- Track Unfollowers with gh-tracker chrome extension.

PaperViz

DEVELOPER

Roorkee, India

Apr. 2020 - Sept. 2020

- Developed a web interface to visualize research papers based on similarity.
- Utilized SentBERT, SciBERT and SPECTER to create document embeddings.

Graph Representation Learning

DEVELOPER

Roorkee, India

Oct. 2019 - Jan. 2020

- PyTorch implementation & blogs on major Graph Representation Learning papers.
- Deep Walk, Graph Convolutional Networks, GraphSAGE, ChebNet, Graph Attention Networks

Satellite Image Classification in Remote Sensing Data Using Neural Nets

DEVELOPER

Roorkee

Feb. 2018

- Developed multiple image classification models on the 21 Class UC Merced Land Use Dataset. [Report]

Achievements & Honors

2019	All India Rank 7 , Flipkart GRID ML Competition Level 1	Bangalore, India
2019	Overall 2nd , Enigma Hackathon, Astrax IIT Mandi 2019 (Astronomy Competition)	Mandi, India
2018	Scholar , Won Chevron Scholarship Student Member AAPG 2018	Roorkee, India
2017	2nd Position , Table Tennis, Sangram'17 (Sports Fest IIT R)	Roorkee, India
2016	Top 0.1% , Qualified JEE Advanced 2016	India
2012	State Level , National Talent Search Examination 2012 (NTSE)	Ghaziabad, India
2012	Participant , Bosch Indo-German 2012 Exchange Programme	Ebern, Germany

Skills

Programming	Python, C/C++, HTML, CSS, Javascript, Shell Scripting, LaTeX
Frameworks	PyTorch, Numpy, SciPy, Keras
Utilities	git, zsh, vim, MacOS X, Sublime, Adobe Photoshop, Sketch
Languages	English, Hindi

Relevant Coursework

Undergraduate

ML/DL/NLP/Vision

India

2016-Present

- CS 229: Machine Learning
- CS224W: Machine Learning with Graphs
- CS 224n: Natural Language Processing with Deep Learning
- CS 11-747: Neural Networks for NLP
- CS 231n: CNNs for Visual Recognition
- NPTEL-NOC 18: Deep Learning

Positions Of Responsibility

2021	Mentor , Google Summer of Code	Remote
2020	Mentor , Mentors Without Borders	Africa
2019	President , Data Science Group	IIT Roorkee
2019	Mentor , Student Mentorship Program	IIT Roorkee
2018	UG, DAPC Representative , Dept. of Earth Sciences, IIT Roorkee	IIT Roorkee