

Anirudh Maiya

✉ anirudhmaiya99@gmail.com

🌐 Website 🌐 Github in LinkedIn

EDUCATION

PES University

Bengaluru, India

Bachelor of Technology - Computer Science and Engineering

2017 - 2021

• *GPA: 8.81 / 10.0 (First Class with Distinction)*

Specialization: Data Science

Courses: Operating Systems, Data Structures, Design and Analysis of Algorithms, Data Analytics, Machine Learning, Linear Algebra

EXPERIENCE

Commvault

Bengaluru, India

Software Engineer

January 2022 - Present

• *Associate Software Engineer*

July 2021 - December 2021

Intern

January 2021 - June 2021

- Designed, implemented and documented an internal data orchestration framework with Leader-Worker architecture. The framework gathers and uncompresses terabytes of customer logs received at Commvault everyday by horizontally scaling out.
- Migrated Apache Tomcat for internal java project from version 9 to 10 as part of company wide version upgrade.
- Migrated internal Eclipse Java project from Apache Ant to Gradle thereby easing the process of dependency management.
- Maintained Commvault Plugin for ServiceNow to be in compliant with ServiceNow Store policy.
- Maintained Commvault Workflows and Reports for Cloud Services team.

National Remote Sensing Centre - Indian Space Research Organisation

Bengaluru, India

• *Project Intern*

October 2019 - April 2020

- Conducted research on pre-existing work done to estimate coconut farm area from remote sensing images.
- Successfully created a novel deep learning model called Siamese U-Net to solve the problem of estimating coconut farm area from multi-spectral data. The work resulted in a paper accepted at IEEE IGARSS - 2021.

Center for Data Sciences and Applied Machine Learning

PES University, India

• *Research Intern*

June 2019 - July 2019

- Conducted research on replacing clouds present in raw Sentinel-2 imagery.
- Successfully implemented a deep learning framework to remove clouds from Sentinel-2 imagery without training data. The work resulted in a paper accepted at Springer ICICC - 2021

PUBLICATIONS

• Tom: Leveraging trend of the observed gradients for faster convergence

Anirudh Maiya, Inumella Sricharan, Anshuman Pandey, Srinivas K. S

Paper | Code

• Cloud Image Prior: Single Image Cloud Removal

Anirudh Maiya, Shylaja S S

International Conference on Innovative Computing and Communications, Advances in Intelligent Systems and Computing, 2021, Springer, Singapore.

Paper | Presentation

• Performance of Different U-Net Architectures for Inventory of Coconut Plantations Using Cartosat-2 Multispectral Data

Sujeeth A Vankudari, Navneet Raju, Anirudh Maiya, Hebbar R, Uma D, Shylaja S S, Ganesha Raj K

IEEE International Geoscience and Remote Sensing Symposium IGARSS, 2021.

Paper | Presentation

• Improving Recognition of Handwritten Kannada Characters Using Mixup Regularization

Chandravva Hebba, Anirudh Maiya, H. R. Mamatha

Advanced Computing, IACC 2021, Communications in Computer and Information Science, vol 1528, Springer, Cham

Paper | Presentation

• Estimation and Applications of Quantiles in Deep Binary Classification

Anuj Tambwekar, Anirudh Maiya, Soma Dhavala and Snehanishu Saha

IEEE Transactions on Artificial Intelligence, 2022

Paper

PROJECTS

- **Rethinking SWATS Optimizer**

A variant of SWATS optimizer which outperforms vanilla SWATS in terms of test accuracy by 1.3% for ResNet-18 and 1.4% for DenseNet-121 on Cifar-10 dataset.

Project Link - <https://github.com/AnirudhMaiya/Rethinking-SWATS-Optimizer>

- **Messup**

A new regularization technique by encountering samples through exponential smoothing. The technique reduces generalization error by 1.6% when compared to Empirical Risk Minimization.

Project Link - <https://github.com/AnirudhMaiya/Messup>

- **Symm-PPO**

A variant of OpenAI's popular reinforcement learning algorithm - Proximal Policy Optimization (PPO). Symm-PPO inculcates the analogy of new policy not being too different from the old one for the entropy term. Median rewards from Symm-PPO outperform/is on par with vanilla PPO.

Project Link - <https://github.com/AnirudhMaiya/Symm-PPO>

- **Why Group Normalization works?**

Empirical proof by contradiction for Group Normalization's claim - "Adjacent channels are not independent and there is a significant advantage of utilizing adjacent channel statistics".

Project Link - <https://github.com/AnirudhMaiya/pytorch-Group-Normalization>

- **MusePlay**

A Spotify-like music streaming website built entirely with PHP, JavaScript, CSS and HTML with PostgreSQL done as part of Database Management Systems coursework. MusePlay provides features such as user creation, playlist creation, search music, personalized music recommendation, top songs local/global.

Project Link - <https://github.com/AnirudhMaiya/MusePlay>

SKILLS

- **Languages:** Python, C, C++, Java, JavaScript, HTML, CSS, PHP
- **Machine Learning Frameworks:** PyTorch, Keras, Tensorflow, scikit-learn
- **Others:** MATLAB, Octave, Apache Spark, Gradle, LaTeX, QGIS

ACHIEVEMENTS

- Award of First Class with Distinction for all 8 semesters
- Prof. MRD Scholarship in the 6th semester for being in the top 20%
- Best Paper Award for Cloud Image Prior: Single Image Cloud Removal at International Conference on Innovative Computing and Communications - 2021 Springer [Link]

CERTIFICATIONS

- Machine Learning Specialization - Dr. Andrew Ng [Link]
- Neural Networks and Deep Learning - Dr. Andrew Ng [Link]
- Convolutional Neural Networks - Dr. Andrew Ng [Link]
- Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization - Dr. Andrew Ng [Link]
- Structuring Machine Learning Projects - Dr. Andrew Ng [Link]