Anirudh Maiya

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Portfolio: anirudhmaiya.github.io
GitHub: github.com/AnirudhMaiya
Google Scholar : scholar.google.com/citations?user=ZYWhPQ8AAAAJ

Education

- **PES University** — Bengaluru, India
  Bachelor of Technology - Computer Science and Engineering; GPA: 8.81 / 10.0 — *2017 - 2021*
  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.
  - Maintained Commvault Plugin for ServiceNow to be in compliant with ServiceNow Store policy.
  - Maintained Commvault Workflows and Gradle build for internal Java Project 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 [Link]
- **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 [Link]

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. Code is made available at this URL.
- **Messup**
  A new regularization technique by encountering samples through exponential smoothing. The technique reduces generalization error by 1.6%. Code is made available at this URL.
- **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 outperforms/is on-par with vanilla PPO. Code is made available at this URL.
- **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. Code is made available at this URL.

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 Hebbi, 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 Snehanshu Saha
  IEEE Transactions on Artificial Intelligence, 2022
  Paper

Skills

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

Achievements

- Award of Distinction for all 8 semesters
- Prof. MRD Scholarship for 6th semester
- 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 from Dr. Andrew Ng [Link]
- Neural Networks and Deep Learning from Dr. Andrew Ng [Link]
- Convolutional Neural Networks from Dr. Andrew Ng [Link]
- Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization from Dr. Andrew Ng [Link]
- Structuring Machine Learning Projects from Dr. Andrew Ng [Link]