

Gautham Krishnan

OBJECTIVE

I am passionate about deep learning and I want to apply my expertise to solve complex research problems and develop innovative AI solutions.

EDUCATION

- 2021-2025 **B.Tech in Computer Science and Engineering - Artificial Intelligence, Amrita Vishwa Vidyapeetham, Amritapuri**
Ongoing CGPA: 8.99/10
- 2021 **St.Mary's Residential School, Higher Secondary Education CBSE**
Percentage: 96.4%
- 2019 **Indian School Ajman, UAE, Higher Education CBSE**
Percentage: 92.4%

Experience

- September - **ACM Internship**
October 2022 As part of the internship, I researched different methods of Sample Size Determination to predict the sample size required to train a Machine Learning model to achieve a certain accuracy and explored various algorithms and evaluated their effectiveness in different scenarios. As part of the research I also explored McNemar's and other statistical tests for determining the better-performing model. Link to Report: https://drive.google.com/file/d/1DTVWHkgnsuFdb_wIYz10AFVIAFs_3RtL/view

PROJECTS

- JUNO-Editor **Tech stack: Python, PyQt, OpenCV**
October 2022 As part of the NASA Space Apps Challenge hackathon my team built a desktop app for processing and editing the raw multichannel grey-scale images captured by the JUNO Spacecraft and combining them to make an RGB photo. The app contains many options for image processing and features such as auto-enhancement. I was responsible for implementing the image processing and enhancement algorithms for our specific use cases.
Link to project: <https://github.com/gauthamk02/JUNOEditor>
- UNET - **Tech stack: Python, PyTorch**
Water Body Segmentation Build a PyTorch UNET model for segmenting water bodies from Satellite Images and deployed it to HuggingFace using Gradio.
Link to project: <https://github.com/gauthamk02/pytorch-waterbody-segmentation>
- Pocket **Tech stack: Flutter, Dart, Firebase**
Tracker July 2022 Pocket Tracker is a simple mobile app for expense tracking. The app differentiates itself from the rest you can take a photo of the receipt and the app will automatically add the amount and necessary details to the database. The app also has additional functionalities for expense management like labelling the receipts, graphical representation of expenses etc.
Link to project: https://github.com/gauthamk02/pocket_tracker
- ResNet- Bird **Tech stack: Python, PyTorch**
Classification ResNet image classification model was built using PyTorch by referring to its implementation in the original paper "Deep Residual Learning for Image Recognition". The model was trained to classify 450 bird species using a ResNet-34 model and deployed to HuggingFace using Gradio.
Link to project: <https://github.com/gauthamk02/pytorch-resnet34-bird-classification>

VOLUNTEERING

- **Introduction to Open Source Workshop 2022:** A month-long workshop was conducted by the FOSS club in our college for freshman students that included sessions on Linux, Git & GitHub, Python, React and Flutter programming. The workshop was attended by 120 students. I was part of the organising team, mentored students and also took multiple sessions on Python programming.
- **Hacktoberfest Meetup Amritapuri 2022:** A 1-day workshop to introduce beginners to Open Source via means of Hacktoberfest(a program by Digital Ocean and GitHub). I helped organize this event on October 23, 2022, and took sessions for the attendees to get them introduced to Linux Terminal Commands

TECHNICAL SKILLS

- Languages** Python, Dart, Java, C, C++
Tools PyTorch, OpenCV, Pandas, Git