

DEVIN Y. DE SILVA

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A self-motivated undergraduate enthusiastic about Data Analysis, Data Processing, Machine Learning techniques, and Explainable AI Seeking an opportunity to gain knowledge and hands-on experience.

Research Interests:

Explainable AI

Parameter Efficient Modelling

Cross distributed modelling

Machine Learning

EDUCATION

University of Moratuwa, Sri Lanka

B.Sc.Engineering(Hons.)

Computer Science and Engineering

Faculty of Engineering

Cumulative GPA: 3.76/4.20(First Class Hons.)

Dean's List in all Semesters 3,4

2018-2023

WORK EXPERIENCE

ML Engineer - IronOne Technologies

June 2023 - Current

AI Labs

I worked on a prediction system for credit card payment delinquency with integrated explainability using SHAP for system fairness and critical decision understanding for the client action takers.

Technologies:- AWS SageMaker, Ensemble Modelling, SHAP

Software Engineer Internship - promiseQ GmbH

December 2021 - August 2022

AI Team/ Deployment team

A full-time internship in the AI Team/ Deployment team at PromiseQ. I worked on a Deployment of Models and Motion detection sub-team. I developed and implemented a background image-based motion detection system for the threat detection API and a Shaky Camera Detection System. Further, Automating deployment and testing through MLOps.

Technologies:- Google cloud platform, OpenCV, Docker, GitLab Runners, Flask, Python

RESEARCH, PUBLICATIONS, SELECTED PROJECTS

TEZARNet: TEmporal Zero-Shot Activity Recognition Network

Jul 2022 - Jun 2023

Final Year Project

ICONIP 2023 publication

Pathirage N Deelaka, **Devin Y De Silva**, Sandareka Wickramanayake, Dulani Meedeniya, Sanka Rasnayaka

SEZ-HARN: Self-Explainable Zero-shot Human Activity Recognition Network Jul 2022 - Jun 2023

Final Year Project

Github

Devin Y De Silva, Pathirage N Deelaka, Sandareka Wickramanayake, Dulani Meedeniya, Sanka Rasnayaka

Geometric Perception based Efficient Text Recognition

July 2022- February 2023

Research Publication

Arxiv Link

P.N.Deelaka, D.R.Jayakodi, **D.Y.Silva**

Digitgen- Python library for synthetic regular scene text dataset generation

July 2022-Present

Personal Project

Repository

A python library that can be used to create synthetic scene text and digits with various noises. This is intended to create synthetic datasets for regular scene text recognition and currently have 19k downloads.

Technology:- OpenCV, Python, Github CI/CD

Smart Breadboard for remote lab experiments

Self supervised Research and Innovation

October 2020 - Feb 2021

[Video and Report](#) - 

Remote Access Breadboard to assist electronics laboratory work during lockdowns in the Pandemic. **1st place** at IEEE PES national design competition, Selected from IEE CAS student design competition 2020-2021, to represent Sri Lanka in the IEEE region 10 (Australia-Asia-Pacific).

Technology:- Lucid Chart, Express

Deforestation Tracking System - Fores-track

Academic Project

August 2021 - December 2021

[Models](#)  [Backend-API](#) 

Developing a deforestation tracking system which uses a semantic segmentation model to identify the changes in vegetation coverage of Sri Lanka using satellite images.

Technologies:- python, Tensorflow, Django, PlanetAPI

Predicting Pneumonia Using Human Chest X-ray - Classification task

July 2020

Personal Project

[medium article](#)  [Repository](#) 

This task focuses on predicting the presence of pneumonia and its type (viral pneumonia or bacterial pneumonia) using human chest X-ray scans, using a ResNet architecture model using PyTorch backend.

Technology:- PyTorch, Python, ResNet

Predicting GI track anomalies Using KVISAR dataset - Classification task

July 2020

Academic Project

[Repository](#) 

This task focuses on predicting the presence of gastric intestinal track anomalies such as polyps, z-lines and ulcerative colitis. Used the KVASIR dataset and several deep CNN architectures such as InceptionV3, Densenet201 and VGG-19.

Technology:- TensorFlow, Python, Matplotlib

Search Engine for Sinhala Metaphors and associated dataset






Academic Project

December 2022 - January 2023

[Repository](#) -  [Dataset](#) 

Technologies:- ElasticSearch, NLTK, Fast-API

COMPETITIONS AND HACKATHONS

Top Ten	IEEE VIPCup'22 <i>Distinguish synthetic AI-generated images from natural ones.</i>  Code
Champions	Data storm 2021- All island open Data science and analytics hackathon <i>Predict customer status and recommend the most suitable product.</i>  RCUOM
Champions	Datathon 2021- Inter-University Data Science Competition <i>Predict customer status and recommend the most suitable product.</i>  SLIIT
Runners up	Datathon 2020- Inter-University Data Science Competition <i>Forecast Coronavirus case counts and sector impact</i>  SLIIT
Runners up	Datathon 2022- Inter-University Data Science Competition <i>Skin Disease detection using Images</i> <i>Anomaly Detection in Server side Events</i>  SLIIT

TECHNICAL SKILLS

Languages	Python, Javascript
Frameworks	Pytorch, Tensorflow, SHAP,

MOOC

Introduction to Machine Learning in Production(<i>Coursera</i>) 	July 2023
Introduction to Deep Learning (With Honors) - HSE University(<i>Coursera-Advanced Level</i>) 	September 2020
Deep Learning with Pytorch: Zero to GANs - Jovian.ml 	July 2020
Data Mining with Python- Pirple 	June 2020

Vice Chairperson of ACM students chapter University of Moratuwa

2021 - 2022

International Coordinator - Nalanda College Astronomical Alumni Society

2019-2020

- Working on awareness projects and presenting our projects in international platforms. Dumbara Sky, was presented on 9th Communicating Astronomy with the Public Conference (CAP) 2021

Poster  Youtube Presentation 

- Presenting our project **TrailBlazer21** in Communicating Astronomy with the Public Conference (CAP) 2022

Images  Participation Invitation 

Batch Representative (Computer Science and Engineering -18 batch)

semester 4,5,6b

References available upon request