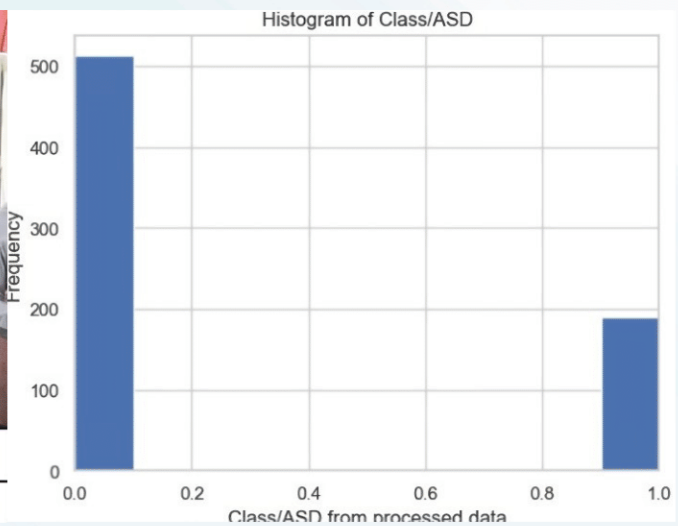


PROJECTS

A GLIMPSE OF PROJECTS BY OUR STUDENTS

AUSTISM DETECTION USING MACHINE LEARNING



University Enrollment No.	Student Name
03815611921	Nandini Singh

Autistic Spectrum Disorder is a neurodevelopment condition associated with significant healthcare costs, and early diagnosis can significantly reduce these. Unfortunately, waiting times for an ASD diagnosis are lengthy and procedures are not cost effective.

This is a binary classification problem, given some attributes of a person, the model can predict whether the person would have ASD using Supervised machine learning.

**SUPERVISOR: DR. ARCHANA KUMAR
& MS. GARIMA GAKHAR**



UNIVERSITY ENROLLMENT NO.	STUDENT NAME
02115611921	JATIN SINGH SAGOI

**SUPERVISOR: DR. ARCHANA KUMAR
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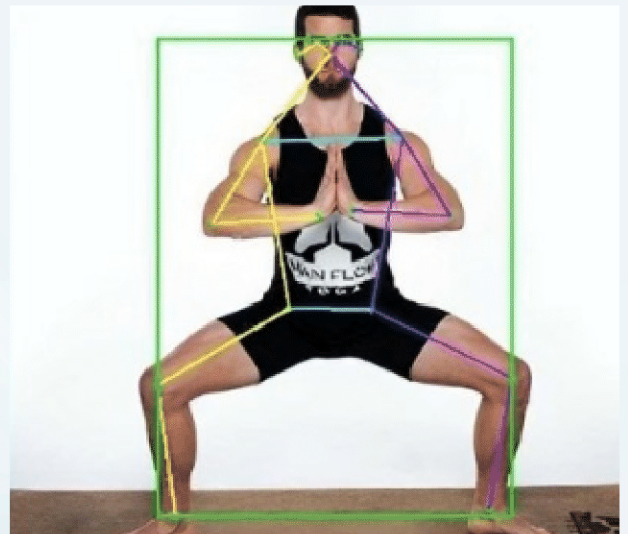
YOGA DELIGHT

A yoga application which detects posture using Deep Learning.

With real-time data captured from camera, a person can get feedback in the application on the accuracy of their pose and keep track of their fitness goal.

This application can be put to use where a Yoga/fitness enthusiast can practice Yoga without the need of an instructor.

The principle reason of the project is to have a user practice Yoga poses accurately and be able to keep a track of daily Yoga routine.



CROP FORECASTING WITH SATELLITE DATA

Better understanding crop yields and how to maximize efficiency of crops is an urgent need.

Used sentinel-2 satellite radar data accessed through Microsoft's Planetary Computer API to build a ml model that predicts rice crop yield for a given geographical location.

Different indices like RVI, NDVI, NDRE, GNDVI were calculated with the help of the band data from the satellite. Which indicates the crop's health and yield.

District	Latitude	Longitude	Season(SA = Summer, AW = Winter, WS = Winter Spring)	Rice Crop Intensity(D-Double, T=Triple)	Date of Harvest	Field size (ha)	Rice Y (kg)
Chau_Plu	10.530542	105.243554	SA	T	15-07-2022	2.40	5
Chau_Plu	10.509250	105.265096	SA	T	15-07-2022	2.40	6
Chau_Plu	10.487721	105.182484	SA	D	15-07-2022	1.95	6
Chau_Plu	10.484463	105.241281	SA	T	15-07-2022	4.30	6
Chau_Plu	10.530558	105.252744	SA	D	14-07-2022	3.30	6


```

Fetching Data from API

catalog = pystac_client.Client.open("https://planetarycomputer.microsoft.com/api/stac/v1")

def get_sentinel_data(longitude, latitude, season, assets):
    """
    Returns a list of WV, WV, WV/N values for a given latitude and longitude over a given time period (base
    Attributes:
    longitude - Longitude
    latitude - Latitude
    season - The season for which band values need to be extracted.
    assets - A list of bands to be extracted
    """
    bands_of_interest = assets
    if season == 'SA':
        time_slice = "2022-05-01/2022-08-31"
    if season == 'WS':
        time_slice = "2022-08-01/2022-11-31"
    return pystac_client.Client.open("https://planetarycomputer.microsoft.com/api/stac/v1").search(

```