

Projects

Quadcopter geofencing simulation using ROS, *rospy*, *shapely*, *CoppeliaSim*
<https://github.com/pratikluitel/ros-geofencing>

- Implemented a custom drone controller in Lua, using CoppeliaSim simulator
- Wrote a custom 2D path planning plugin for Quadcopters using rospy and shapely
- Thoroughly tested the system on Kathmandu geojson data

Elephant Detection and Alarm System, *scikit-learn*, *keras*
A research project to mitigate Human Wildlife Conflict in rural Nepal

- Collected primary data from elephants using a custom-built IMU sensor
- Performed exploratory data analysis to determine the optimal algorithm for elephant stampede detection from among various techniques
- Wrote the core anomaly detection logic in scikit-learn

Asthir - Island terrain generation, *processing*, *controlP5*
<https://github.com/anmolpdl/asthir>

- Worked on an island generator as a part of an academic computer graphics project in processing
- Implemented a perlin noise generator for generating a realistic simulation of terrain and water
- Wrote the core logic for the camera, camera projection and FOV
- Designed and implemented the user interface for changing the simulation parameters using controlP5

Awards

Runner Up, DandyHacks, *Major League Hacking*, *University of Rochester* 2020
<https://devpost.com/software/drow-z>

- DandyHacks is a hackathon organized by University of Rochester, New York
- Built a working drowsiness detection and alert system using opencv
- Worked on algorithms to make the system adapt to differences in facial features

Skills

Data Analysis: numpy, pandas, geopandas, SQL, matplotlib, geoplot
Image Processing: opencv-python
Deployment: tensorflow-serving, multi-model-server, docker
Backend: django, flask
Web Scraping: selenium-python, beautifulsoup
Tools and PM: git, scrum, agile, CI/CD
Other languages, frameworks: tensorflow, nodejs, html, css, ReactJS, React Native

Interests

Video games, Reading history, Playing guitar, Writing