KORAT ANKITKUMAR RATILAL

Data Scientist
Amnex Infotechnologies Pvt Ltd.

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EDUCATION

Degree/Exam	Institute	CGPA/Marks	Year
M.TECH (Land and Water Resources Engg.)	IIT Kharagpur	8.47 / 10	2021
B. TECH (Agriculture Engg.)	Junagadh Agricultural University	7.67 / 10	2019
HSC	GSHEB	75.00%	2015
SSC	GSEB	88.00%	2013

EXPERIANCES

Data Scientist | Amnex Infotechnologies Pvt Ltd. — Oct 2021 to Present

Cloud removal from sentinel 2 satellite imageries

- Created algorithms in GEE for finding date of sentinel 1 and sentinel 2 were passed on same geographical area on same date.
- Created algorithms in python using GDAL library for pre-processing of downloaded satellite imageries.
- Implementing different image to image translation architecture.

Automatic Number Plate Recognition (ANPR) model

- Created dataset for ANPR using Gandhinagar Road surveillance camera and annotating labels for number plate.
- Implemented Yolov4 and yolov5 architecture for detection number plate from live streaming video. Yolov5 gives better result for detection as compared to yolov4.
- Implemented different OCR architecture for number plate recognition and found that PaddleOCR gives better result.
- Dockerised detection and recognition model and testing through API.

Scraping AnyROR dataset for Farm information

- Implemented DenseNet architecture for recognition captcha code which required for login different farm data.
- Scraped AnyROR data using request library and save in database.

Geospatial Data Scientist | The Art of Living Organization — Feb 2021 to Sep 2021

- Select location for recharge structure base on certain Criteria (example: Geomorphology, lithology, soil depth, Slope, LULC etc.) using GEE and ArcGIS for satellite images processing and classification. Create final map on GEE.
- Automated manual process using python GDAL library of satellite image processing.

INTERNSHIP

Data Scientist | Sabudh Foundation — July 2021 to Dec 2021

- Learnt statistics and mathematics for data science, Basic to advance python and data structure algorithm, machine learning and deep learning, computer vision architecture (object detection, object segmentation etc.) and basic natural language processing.
- **Project**: Object detection and satellite imagery processing using deep learning
  1. Worked on super resolution (Enhance resolution) of satellite imageries for increase spatial resolution 10m to 5m.
  2. Worked on classification problem of discriminate forest and non-forest of satellite images.
  3. Worked on object detection architectures of yolo for detecting forest in satellite images.

PROJECTS

Detection Crop Water Stress in Wheat Crop using UAV based Multispectral and Thermal Imageries | M.Tech. Thesis

- NGRDI is found to be the best vegetation index for detection of water stress in wheat followed by NDVI.
- WDI maps are useful for detection of water stress in small field scale, and it's also applicable for partial vegetation cover of wheat crop.
- The generalized model developed between soil moisture depletion levels and WDI values for irrigation scheduling.
- The generalized model which has RMSE, MAE, NSE and R^2 are found to be 0.06, 0.05, 0.92 and 0.91, respectively.

AWARDS AND ACHIEVEMENTS

Secured All India Rank **54** in the GATE (AG) 2019.

SKILL SUMMARY

- **Programming Languages**: Python (Pandas, NumPy, SciPy, Matplotlib, Seaborn, Plotly, SciKit Learn), SQL.
- **Tools:** Docker, AWS Sagemaker , Google Colab, LaTex.
- **Environments**: Linux.
- **Soft Skills:** Management and Communication skills, Enthusiastic and Optimistic, Responsibility and Punctuality, Public Speaking.
- **Software**: MS PowerPoint, MS Excel, MS Word.
- **Languages known**: English, Hindi, Gujarati.