

HIMANSHU BHESANIYA

DATA SCIENTIST

Contact

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Skills

Python



Machine Learning



Database



Rest API using Flask



Data Scrapping



Deep Learning



Automation



Data Scientist familiar with gathering, cleaning and organizing data for use by technical and non-technical personnel. Highly organized, motivated and diligent with significant background in Machine Learning with Python.

Work History

2019-08 -
Current

Data Scientist

Amnex infotechnologies, Ahmedabad, Gujarat
Almost 3year experience with data science highly skilled machine learning model developing, testing, documentation etc. Handles complex project management, coordination work and very efficient to deliver results.

- **MACHINE LEARNING**

Skills : Python, Supervised - Unsupervised classification, Regression, Predictive analytics, Data Analysis

1) Pixel based crop classification using ML

- Geospatial ground data collection planning of ground labels
- Data visualization , cleaning and verification of ground labels
- Applied SMOTE for class imbalance and performed crop classification using XGBoost and achieved accuracy of 89%
- Performed real time Crop damage assessment, Drought monitoring, yield estimation using RF with 85% accuracy

2) Object based crop classification using Image

Processing and MI

- Generate farm boundaries on PlanetScope optical dataset using standard deviation
- Classified each farm with accuracy of 86% using RF algorithm

3) Knowledge based crop classification using Statistical method and Texture based using on SAR

- **DATABASE, REST API's, DATA SCRAPPING, AUTOMATION**

Skills : Python, PostgreSQL, SQLite, Flask, Selenium, Requests, BeautifulSoup4, etc.

1) Database management

Very Good

GIS & Remote-Sensing

Very Good

Google Earth Engine Code

Very Good

- Handling database like PostgreSQL, SQLite with python

- Managing timeseries data using timescaleDB
- Predictive analytics in timeseries data
- Managing Gandhinagar ATCS data

2) Rest API development (Flask based)

- **Weather API**

- download weather data in .nc format
- convert this data into georeferenced image
- send final image into response

- **Sentinel-1 API**

- Download Sentinel-1 Images from scihub
- Preprocessing using snappy python (making SAR)
- Generate soil moisture and crop health image from SAR

- **FOIS API**

- Freight Operation Information System data scrapping API creation

- **AVLS CTU API**

- Making API' to download CTU bus videos and monitoring alarm automatically

3) Data Scrapping

- Soil health card data from govt. of gujarat
- Anyror data from govt. of gujarat
- Agriculture shop details with lat-long from google map for whole gujarat
- Andhrapradesh govt. digital crop booking data
- Andhrapradesh govt. village map data
- Andhrapradesh govt. FMB data
- Gujarat APMC data from govt. website
- Indian port sea route data
- Indian Rail freight operation info.

4) Automation

- Automation in GJ-crop area estimation and loss assessment
- Design fully automated pipeline in preprocessing steps for generation of digital Farm boundary for whole india

- **DEEP LEARNING**

- 1) Design model to solve hard captcha
- 2) Crop identification model development

- 3) Design model for road asset management
- 4) End to end implementation to generate farm boundary
- 5) Crop disease identification model development

- **OTHER SKILLS**

- 1) **Dash, Plotly, Mapbox**

- Crop knowledge matrix dashboard
- Dam water monitoring dashboard
- Crop damage assessment dashboard
- COVID-19 Indore municipality dashboard

- 2) **Google Earth Engine**

- Landuse - Landcover classification using GEE
- Download and visualize sentinel products from GEE
- Automate multi data download process using python gee configuration

- 3) **Softwares**

- **Python**

Numpy, Pandas, Scikitlearn, Matplotlib, Gdal, Tesseract, SQLite

- **Anaconda**

- **Postman**

- **Qgis**

- **Arcgis**

- **VScode**

Education

2015-08 -
2019-07

Bachelor of Science: Agriculture Engineering

Junagadh Agriculture University - Junagadh

Hobbies

Solving Python Problems