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JOB SUMMARY (*OVER 6 YEARS OF PROVEN RECORD*)

- Currently Working with Webonise Lab Private Limited, Pune, India, as Senior Software Developer, since July-2014 on Python development environment.
- Worked in National Crop Forecast Centre (Ministry of Agriculture, Govt of India), New Delhi from April-2012 to June-2014 as GIS and Remote Sensing Analyst.
- Worked in National Remote Sensing Centre (ISRO, Govt of India) Hyderabad, from October-2011 to March-2012 as Junior Research Fellow.
- Worked in Tech Mahindra, Hyderabad, India, from January-2011 to September-2011 as Trainee GIS Associate.

TECHNICAL SKILLS

- 6+ years of professional experience in Remote Sensing, GIS, Aerial and Satellite image processing.
- More than 3 years of experience in back-end python application development.
- Proficient with OOP concepts, Python (gdal and associated modules, numpy, scipy, arcpy, geocoding, pandas, fiona, shapely, reportlab etc.), IDL, Java, HTML, CSS and SQL.
- Knowledge in spatial database viz. PostgreSQL and PostGIS, Geoserver.
- Proficient in IDE's like Pycharm5, IDL, Sublime text2 and Eclipse.
- Experience in SCM tools like JIRA, Confluence, Base camp and GitHub.
- Hands on experience with GIS and Image processing software tools, ArcGIS Desktop, QGIS, ERDAS Imagine, ENVI and Geomatica etc.
- Researched and developed algorithms in python and IDL development environment for Remote Sensing and GIS based applications.
- Efficient in Remote Sensing algorithms viz. Vegetation Indices, Crop Detection, Sensor Image processing (Multispectral, visual, Lidar) and Image classification techniques.
- Hands on experience with Spatial analysis, 3D analysis and Network analysis.
- Over 3 years of experience in Agile software development environment.

EDUCATIONAL PROFILE

- Master of Science in Geo-spatial Science and Technology from JNTU Hyderabad (2009).
- Bachelor of Science in Physics from Kakatiya University, Warangal (2007).

ACHIEVEMENTS

- Paper presented entitled of "*Detection and Validation of Active Forest Fires using MODIS and IRS P6 AWiFS data*" in TROPMET-2011 conducted by Indian Meteorological Society Hyderabad Chapter, Hyderabad.
- Paper presented titled "*Discrimination of Jute crop and other land cover features using Multi-Temporal RADARSAT SAR data*" in Indian Society of Remote Sensing and Indian Society of Geomatics conference-2012, New Delhi.
- Abstract accepted entitled "*Analysis of RISAT-1 Quad Polarization Data for various crops*" in International Society for Photogrammetry and Remote Sensing (ISPRS) - 2014 Conference, Hyderabad held in Dec-2014.

PROFESSIONAL EXPERIENCE (*PROJECTS*)

Webonise Lab Pvt. Ltd., Pune.
Senior Software Developer – GIS, Jul 2014 – Till date
Project: Precision Mapper **(Client:** PrecisionHawk Inc., USA**)**

Project Description: PrecisionMapper works online, automatically processes aerial data into 2D or 3D products, features a continuously expanding library of on-demand analysis tools/algorithms, and makes sharing or collaborating easy.
Technologies:
Operating System & Platform: Windows/Windows Server/Linux, pycharm5, spyder
Language: Python2.7 (gdal and associated packages), IDL
Processing Tools: ArcGIS Desktop, QGIS, ENVI

- Working as a Software Developer for development of GIS based applications using Python packages and IDL.
- Research and development of algorithms in Python and IDL for automated processing of aerial image and GIS data based agricultural and other industrial applications
- Executed python based application for automated processing of calculating roof measurements, hail damage analysis of a roof and progress monitoring of a site over time.
- Developed algorithms for Agriculture domain vegetation indices to identify and monitoring of crop health, condition, water requirement, nitrogen content etc.
- Analysis of UAV based visual, multi-spectral, thermal and Lidar sensor data.
- Processing of point cloud data and 3D modeling for 3D based applications to generate height information of objects.
- Delivered GIS maps and PDF reports as per client requirements.
- Aerial image processing with photogrammetric suits for Geo-referenced orthomosaic processing and quality assessment of 2D and 3D products.
- End to end geospatial customer end support for PrecisionMapper users.

Randstad India Ltd., New Delhi.
Remote Sensing & GIS – Analyst, Apr 2012 – Jun 2014
Projects: FASAL & NADAMS **(Client:** Mahalanobis National Crop Forecast Centre, Ministry of Agriculture, Govt. of India, New Delhi.**)**

Project Description: To operationalize the use of space and related technology for better agricultural forecasting and drought assessment.
Technologies:
Operating System & Platform: Windows
Language: Python2.7 (gdal and associated packages)
Processing Tools: ArcGIS Desktop, QGIS, ENVI, ERDAS Imagine, PCI Geomatica

- **FASAL** (Forecasting Agricultural output using Space, Agro meteorology and Land based observations): The main objective of the project is remote sensing based National, State and District level pre-harvest crop acreage and production forecasts of different major crops of India.

- Research and development of hybrid model based classification techniques to estimate crop acreage using microwave satellite data.
- Supervised, unsupervised classification procedures to differentiate major crops of India using optical and multi-spectral satellite remote sensing data for crop acreage.
- Production estimates using semi-physical and Remote Sensing index based yield models.
- **NADAMS** (National Agricultural Drought Assessment and Monitoring System)**:** Agricultural Drought and crop condition assessment and monitoring at National, State, District and Sub Division level using Satellite Remote Sensing based vegetation indices and Meteorological data.

National Remote Sensing Centre (ISRO), Hyderabad.
Junior Research Fellow, Oct-11 to Mar-12
Project: RISAT Utilization
Technologies:
Operating System & Platform: Windows
Processing Tools: ArcGIS Desktop, QGIS, ENVI, ERDAS Imagine, PCI Geomatica and PolSARpro

Project Description: Monitoring agricultural areas for crop inventory and agricultural drought assessment by utilizing Synthetic Aperture Radar(SAR) data.

- The research focused to develop operational procedures for estimating in-season cropped area, its progression and discrimination of crops using multi polarization SAR data of Radarsat-2 and subsequently using RISAT-1 data.

Mahindra Satyam, Hyderabad.
Trainee GIS Associate, Jan 2011 – Sep 2011
Project: Navigable Coverage Rural Maintenance **(Client:** Navteq, USA**)**

Project Description: The project database is mainly using for Car Navigation.

- Responsibility to update of vector database as per imagery and the total road information like speed breakers, turns, speed Limits, Dividers, RDMs (Restricted Driver Maneuver), parking areas, also the names and addresses update as per the source shape file logically.

Master of Science Research Work
National Remote Sensing Centre (ISRO), Hyderabad.

Thesis Title: *Studies on Forest Fire dynamics over India using multi-temporal, multi-satellite data and GIS*
Research Objectives:
- Near real-time active Forest Fire monitoring using TERRA/AQUA MODIS Satellite data.
- Validation of MODIS active fire data with IRS P6 AWiFS data
- Studying Forest Fire behaviour in Nallamalai Forests, Andhra Pradesh using MODIS satellite data.