RAVI JONNALAGADDA

Data Scientist

Contact

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Skills

Machine Learning: Logistic Regression, Linear Regression, Decision Trees, Random Forest, KMeans Clustering, XGBoost, Adboost, SVM. Scikit-Learn
Deep Learning: OCR, NLP, Keras, ANN, CNN, RNN, LSTM, Spacy, NLTK, Tensor Flow, Geni AI, Time Series Analysis,

Cloud Platforms: IBM Cloud, Azure, Google Colab, Jupyter, MongoDB, MySQL, PostgreSQL
Programming Languages: Python, C, C++, SQL, Matlab, JavaScript, FORTRAN
Data Manipulation: Pandas, NumPy
Visualization: Matplotlib, Seaborn
Other:, SciPy, PyTorch, React JS, Flask

Professional Summary

Experienced Data Scientist with over 5 years of experience in executing data-driven solutions to enhance internal data processing efficiency, accuracy, and utility. Proficient in a diverse range of data science techniques, including predictive modeling, AI machine learning algorithms, deep learning techniques, natural language processing (NLP), computer vision, and time series analysis. Successfully led projects that improved model accuracy and contributed to significant business growth. Seeking a challenging data scientist position at Geni AI to leverage my expertise in analyzing complex data and delivering actionable insights to drive business growth.

Work Experience

Data Scientist | DIGIKS INFOTECH PVT LTD, Hyderabad, India | May 2019 - Present

- Transformed raw data into actionable intelligence using techniques such as Logistic Regression, Linear Regression, Clustering, Decision Trees, Random Forest, XGBoost, and Time Series Analysis.
- Applied deep learning models (Spacy, NLTK, OCR, NLP, Keras, ANN, CNN, RNN, and LSTM) for improved accuracy and performance.
- Developed Computer Vision applications utilizing Keras, Harcascade, and Face Recognition technologies.
- Collaborated with IBM Cloud, Azure, Jupyter, and Google Colab to optimize the data science workflow.
- Created comprehensive data science course materials to facilitate knowledge sharing and skill development.
- Proficient in Python for data manipulation, analysis, and model development.
- Developed Web applications using frameworks like Flask, React JS, and Django.

JRF Research Fellowship-UGC, Osmania University, Hyderabad, India December 2015 - January 2019

- Contributed to research on "Application of Diamond source rocks lamproite using Geophysical techniques," resulting in research publications.

- **Geophysical Software:** GEOSOFT, RAMAG, RES2DVIN, MESA, SPW, SURFER, PROMAX, ArcGIS, QGIS

Personal Skills

Self-motivated
Communicative
Leadership
Quick Learner
Enthusiastic
Problem Solving
Adaptability
Decision Making

Languages

English
Telugu
Hindi

Hobbies

Walking
Journey
Cooking

Project Fellow, Osmania University, Hyderabad, India.
July 2013 - December 2015

- Conducted resource potential assessment in selected areas using Geophysical Techniques, providing valuable insights.

Geophysicist Shivani Oil and Gas Exploration Services Ltd. India
June 2008 - May 2013

- Worked for data acquisition and processing for 2D and 3D seismic data, collaborating with clients including Oil India Ltd and ONGC.

Education

Ph.D. in Geophysics, Osmania University, Hyderabad, India, Awarded October 2023

- *Dissertation: "Application of magnetic, electromagnetic, electrical and remote sensing methods for location of lamproite bodies in northeastern Dharwar craton, Telangana, India."*

M.Sc. Geophysics, with first class in 2008 from Osmania University, Hyderabad, India

B.Sc. Mathematics, Physics, and Computer Science, with first class, from Kakatiya University, in 2006. Warangal, India

Intermediate (10+2), from Board of Intermediate Education, Andhra Pradesh, Subjects: Mathematics, Physics, Chemistry, With first class in 2002.

S.S.C. from Board of Secondary Education, Andhra Pradesh with first class in 2000.

Qualified **APSET (SLET/ Lecturers/ Assistant professorship**) in Earth Science
Andhra Pradesh State Eligibility Test (APSET)
Qualified in 2012

Projects

Health Prediction Project (2023-2024)

- Implemented machine learning models to predict health-related outcomes for diabetic and heart disease patients.
- Developed predictive models using algorithms such as logistic regression, decision trees, and ensemble methods.
- Conducted feature engineering and selection to improve model accuracy and interpretability.
- Validated models using cross-validation techniques and assessed performance metrics (accuracy, precision, and recall).

Sentiment Analysis for Product using NLP (2022-2023)

- Utilized Natural Language Processing (NLP) techniques for sentiment analysis of product reviews.
- Built a sentiment classification model using techniques such as tokenization, word embedding's, and sentiment lexicons.
- Analysed customer feedback to derive insights into product perception and customer satisfaction trends.
- Implemented the model in a scalable environment to process large volumes of textual data efficiently.

Face Recognition Attendance System (2022-2023)

- Developed an attendance system using face recognition and OpenCV with Flask.
- Implemented facial detection and recognition algorithms to accurately identify individuals.
- Integrated with a web application for real-time attendance tracking and reporting.

OCR Project(2019-2020)

- Implemented Optical Character Recognition (OCR) for PDF and image files.
- Conducted text extraction and analysis to extract meaningful information from documents.
- Utilized Tesseract and custom preprocessing techniques to enhance accuracy.

Customer Segmentation for Sales Data (2020-2022)

- Applied K-means clustering for customer segmentation using time series data.
- Analyzed sales data to identify distinct customer segments based on purchasing behavior and demographics.
- Developed targeted marketing strategies to improve customer engagement and retention.

Fake News Detection Project (2019-2020)

- Implemented NLP techniques and logistic regression for detecting fake news.
- Developed a classification model to distinguish between genuine and fake news articles.
- Utilized natural language processing tools such as NLTK and word embeddings for feature extraction.

Earthquake Prediction(2022-2023)

- Built a time series model for earthquake prediction using historical seismic data.
- Implemented algorithms for time series forecasting and anomaly detection.
- Validated model performance and accuracy using appropriate evaluation metrics.

Well Log Geophysical Data Analysis Project (2021-2022)

- Conducted data analysis using K-means clustering, filtering, and Walsh transform on well log geophysical data.
- Identified patterns and anomalies in geophysical data to optimize oil and gas exploration processes.
- Presented findings and recommendations to improve drilling efficiency and geological understanding.

3D Seismic Data Acquisition Projects (2008-2013)
Data processing Geophysicist, field Geophysicist, and uphole observer for 2D and 3D seismic data acquisition. Proficient in processing data up to seismic data processing using SPW software and good knowledge in MESA for seismic design software.

Worked on three different seismic projects

- 3 D seismic data acquisition, Mummidivaram Yanam area Andhrapradesh (APRIL 2010 TO MAY 2013) Oil India Ltd as client.
- 3D seismic data acquisition project in Digboi area, ASSAM (November 2009 to April 2010) Seismic 3D data acquisition and processing Oil India Ltd as client.
- 2D seismic Data acquisition, in Udaipur area. Tripura (Dec 2008 to June October 2009) ONGC as client.

Crustal Assessment and Resource Potential Management in the Northeastern Dharwar Craton (2013-2015)

- A geophysical investigation coupled with remote sensing analysis is being conducted to evaluate the crustal structure and assess resource potential in the northeastern Dharwar Craton, Telangana State, India. This project is funded by the University Grants Commission (UGC) under the UPE-CART-ES scheme and is based at Osmania University.

Certifications

- Deep Learning with PyTorch: Generative Adversarial Network - Coursera (Aug 2024)
- University of Michigan - Introduction to Data Science in Python - Coursera (Sep 2022)
- Machine Learning Pipelines with Azure ML Studio Project - Coursera (Sep 2022)
- Transfer Learning for NLP with Tensor Flow Hub - Coursera (Sep 2022)
- Geological Survey of India - Refresher Course on Ground Geophysics and Geophysical Logging for Mineral Exploration (Sep 2021)
- Advanced Machine Learning and Signal Processing - Coursera (Nov 2020)
- Advanced Writing - Coursera (Oct 2020)
- Deep Learning Fundamentals - Cognitive Class (Sep 2020)
- Deep Learning using Tensor Flow - IBM (Sep 2020)
- Applied Data Science Capstone - Coursera (Aug 2020)
- Data Analysis with Python - Coursera (Aug 2020)
- Data Visualization with Python - Coursera (Aug 2020)
- IBM Data Science Professional Certificate - Coursera (Aug 2020)
- IBM Databases and SQL for Data Science - Coursera (Aug 2020)
- Machine Learning with Python - Coursera (Aug 2020)
  Python for Data Science and AI - Coursera (Aug 2020)

Research Publications

- Ravi, J., Mathur, R. R., & Sridhar, A. (2024). Geophysical Characterization of Lamproite Fields in the Dharwar Craton Using VLF-EM and Advanced Filtering Techniques: Insights from Conductivity Analysis and Analytical Signal Mapping. Journal of Geophysics and Engineering, Oxford University Press 2024, ISSN 1742-2132, EISSN 1742-2140. https://doi.org/10.1093/jge/gxae035

- Ravi, J., Mathur, R. R., & Sridhar, A. (2023). Delineation of lamproite pipes in parts of Telangana state, southern India: A magnetic approach. Journal of the Indian Geophysical Union, 27(5). Online ISSN: 0971-9709, Print ISSN: 0257-7968.

- Ravi, J., & Mathur, R. R. (2021). Application of Magnetic and Remote Sensing Methods to Delineate the Ramadugu Lamproite in North-Eastern Dharwar Craton, India. Journal of Scientific Research, 65(1). ISSN: 0447-9483.

- Ravi, J., Mathur, R. R., & Sridhar, A. (2019). Remote sensing and VLF-EM techniques to delineate lamproites in Vattikode, Gundrapally and Marepally areas, Nalgonda district, Telangana state, India. Journal of Applied Geochemistry, 21(3), 356–363. Print ISSN: 0972-1967. Online ISSN: 2319-4316.