

Bheru Lal Mali

Associate Data Scientist At
Innoplexus



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blmali

Technical Skills

Machine Learning



Deep Learning



NLP



Data Science



Statistics



Data Structure, Algo



Computer Vision



Programming Language:

Python



C++



C



Technology.

- Jupyter Notebook.
- MongoDB.
- Keras.
- Tensorflow.
- Sklearn.

Education

B-Tech

- CGPA: 9.03
- IIT (BHU), Varanasi, India
- Batch: 2015 - 2019

12th Class

- percentage: 86.6
- Jawahar Navodaya Vidyalaya Bhilwara, Rajasthan
- 2013 - 2014

Experience

July 2019 -
Present

Associate Data Scientist

Innoplexus Consulting Services AG

Project: Clinical Trial Prediction

- Worked on Clinical Trial Prediction model from initial stage to final product.
- Worked on Feature Creation, Pre-Processing, Imputation, Univariate Analysis, Bi-variate Analysis, Outlier Detection, Hypothesis building, statistical hypothesis test and visualisation of features.
- Apply Logistics regression, Decision Tree, XGBoost classifier and ensemble of all these machine learning model.
- Hyper-parameter tuning for these ML Model using grid search.
- Got good F1 score for this Clinical trial prediction model.
- **Tools:** Python, Elasticsearch, MongoDB, Pymongo, Jupyter Notebook.

Project: Extract Features which are responsible for Segmentation of patients in terms of effectiveness of a drug.

- Worked on Imputation of features by K-mean Imputation.
- Statistical Testing like t-test, ANOVA, chi-square test.
- Analysis of pearson and spearman correlation to analyse the multicollinearity between features.
- Label Encoding of categorical features.
- Apply Decision Tree Model to see Patient Segmentation and figure out features which are responsible for purity of node in Decision Tree.

Internship

June 2019 -
July 2019

Intern

URS Techonology

Project: Bank Statement Extractor

- Apply table extraction to Bank statement PDF (camelot and Tabula).
- Get text data from tabulated block of Bank statements.
- Create Dataset for CRF model to tag account holder Name, Bank Name, Account Number.
- Feed prepared Dataset into CRF Model for training.
- Got acceptable F1 score for this Model.
- **Tools:** Python, Anaconda Navigator, CRF Model, camelot, Tabula, pdftotext.

Projects

Sentiment Analysis with Deep Learning using BERT

- I have learned few concept in this project.
- What BERT is and what it can do,
- Clean and preprocess text dataset,
- Split dataset into training and validation sets using stratified approach,
- Tokenize (encode) dataset using BERT tokenizer,
- Design BERT finetuning architecture
- How can we select Evaluation matrix based on distribution of target variable.
- Evaluate performance using F1 scores and accuracy.
- Model architecture.

Transfer Learning for NLP with TensorFlow Hub

- Use pre-trained NLP text embedding models like universal-sentence-encoder, tf2-preview/nnlm-en-dim128 from TensorFlow Hub. Perform transfer learning to fine-tune models on real-world text data (Quora Insincere Questions Dataset, dataset available on kaggle, it as part of contest)
- Clean and preprocess text dataset,

- Visualize model performance metrics with TensorBoard

Contests

Jigsaw Multilingual Toxic Comment Classification

- Participated in Jigsaw Multilingual Toxic Comment Classification contest held on kaggle platform.
- Use ensemble of Roberta, distilbert Transformer model and get area under the ROC curve = 0.9462.

Participated in WiDS Datathon 2020

- Participated in WiDS Datathon 2020 contest held on kaggle platform.
- ranked in the top 11 percentage.

Regular Participation in Coding Contests

- Solving Data structure and Algorithms in spare time.
- very good rank on university level.

Courses

- Neural Networks and Deep Learning
- Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization
- Sequence Models
- Sequences, Time Series and Prediction
- Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning
- Natural Language Processing in TensorFlow
- Convolutional Neural Networks in TensorFlow
- End-to-End Machine Learning with TensorFlow on GCP

Extra Curricular Activities

Participated in various contests held on Kaggle and Analytics Vidya and secured good positions.

Participated in under 19 group, Boys category in the National level Kho-Kho Meet organized by NAVODAYA VIDYALAYA SMITI.

Winner in Kho-Kho at Spardha'17 (Sports Festival of IIT BHU).

Attended Combined Annual Training Camp in National Cadet Corps and got A Certificate in NCC.

Successfully completed Microsoft code.fun.do online conducted during Jan-11-17.

Position of responsibility

Worked as Workshop Senior Coordinator in Technex'18 (Annual Techno-Management Festival of IIT BHU).

Worked as Teaching Assistant in course (CSO-101) Computer Programming.

Captain of IIT BHU Kho-Kho Team in Academic session of 2017- 2018. And Participated in Spardha, Udghosh, and Aavahan under my captaincy

Personal Profile

Date of Birth: 5th Jan 1996 **Languages Known:** English and Hindi. **Address:** Flat no. 303 krishankunj, sarkar chowk, marunji, Hinjewadi, Pune.