

Vibhuti Bansal

Data Science - Machine Learning - Computer Vision

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ResearchGate

in vibhuti bansal

VibhutiBansal-11

Formal Education

Bharati Vidyapeeth's College of Engineering

B.Tech Computer Science (2019-2023) : 9.22 CGPA

Seth Anandram Jaipuria School

Class 12 (2019) : 95.2% | Class 10 (2017) : 10 CGPA

Experience

ML Research Intern : Google exploreCSR

IIT Gandhinagar (June 2022 - Ongoing)

- Compared and experimented ways of incorporating uncertainty in neural networks (Bayesian & Non-Bayesian) | [Link](#)
- Rendered images for Dr. Kevin Murphy's Book II on Probabilistic ML

Data Analyst

Ernst & Young (May 2022 - June 2022)

- Simplified the workflow of automatic HTML parsing to Excel
- Utilised Power BI and support APIs to create estimated travel time between two locations
- Structured mapping between ESG and BRSR using SQL

Data Science

Innomatics Research Lab | April 2021 – July 2021

- Understood and implemented basic statistical concepts using Python
- Used QQ plots, Box Cox Transformation and IQR to understand the data and EDA on raw data | [Link](#)

ML Instructor

What after College (WAC) | November 2020 - April 2021

- Took biweekly sessions on basics of ML

Research Publications

4-class lung disease detection including COVID

Accepted for 26th International Conference of Pattern Recognition

This paper includes preprocessing technique for contrast enhancement along with correlation based metric undersampling for CXR images. The neural network takes into account a new custom loss function to reduce class imbalance.

Enhanced DCNN for Classifying 8 ICD

Published : Special Issue HCI for Industrial Applications

Model to classify images into 8 Indian Classical Dance Forms. It uses Image Truncated Thresholding and ResNet50 as base model. Some of the dataset images were scraped off frame-wise from youtube videos

Skills

PROGRAMMING

C++ • C • Python • SQL • Dart

LIBRARIES/Frameworks

Jax • Flax • Tensorflow • Keras • SkLearn • OpenCV • Numpy • Pandas • Matplotlib • GeoPandas • Firebase • Flutter

TOOLS & PLATFORMS

Git • Jupyter Notebook • VSCode • Android Studio • MySQL • Advanced Excel

Projects

Uncertainty in Neural Networks

- Uncertainty quantification helps in the optimization & decision-making process.

Abuse Detection for 13 low resource Indic languages : Moj Dataset

- An baseline comparison of Native ML models, transformer models to show XLM-Roberta outperformed.
- Data pre-processing (Transliteration, Cleaning) and leveraging emoji based data embedding is done to obtain maximum performance of F1 score of 88.09 on the test set

Geosis

- Conceptualised the website which makes location based prediction of annual forest cover. (Data : scraped from govt. sources for 20 years). Geographic Visual analysis dashboard was implemented to observe the NDVI change & climate change over years.

Extra Participation

Vice Chairperson

Campus Blocks BVP (2021-2022)

- Take initiative, plan and organize technical events for college peers to enhance community learning | [Website](#)

WIE HACK 3.0

1st Runner-Up