NISHA AC

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SUMMARY

A driven and detail-oriented professional with a robust foundation in statistical analysis, data visualization, and machine learning. Proficient in Python and data visualization tools, with hands-on experience in building predictive models and analyzing complex datasets. Committed to leveraging expertise to help organizations extract valuable insights from data, enabling informed, data-driven decisions. Excited about collaborating with industry professionals and eager to advance within this evolving field through continuous development.

PROJECTS

BANGALORE HOUSE PRICE PREDICTION

- Objective: Engineer a predictive model for Bangalore house prices to analyze market trends and streamline valuations.
- Approach:
  o Cleaned and preprocessed house price data, addressing null values and outliers.
  o Performed exploratory data analysis for insights into feature distributions and relationships.
  o Optimized hyperparameters and trained a regression model for accurate price predictions.
- Outcome: Achieved the best R2 score using the Linear regression model.
- Tools: Python, EDA, Statistical Analysis, Machine Learning, Supervised Learning, Linear Regression

STROKE PREDICTION USING MACHINE LEARNING

- Objective: Build ML algorithms to detect stroke risk, aiding in preventive measures and timely interventions.
- Approach:
  o Prepared data by handling missing values and encoding categorical variables.
  o Conducted preliminary data examination to identify predictors.
  o Applied ensemble model techniques when necessary.
  o Tuned and evaluated ML models using metrics like accuracy and F1-score.
- Outcome: The Random Forest model achieved 0.885 accuracy on the test set.
- Tools: Python, EDA, Machine Learning, Supervised Learning, Logistic Regression, Random Forest, Decision Tree, XGBoost, Adaboost, Gradient Boosting

ANALYSIS AND INTREPRETATION OF EEG SIGNALS FOR BCI APPLICATION| April 2022- July2022

- **BCI Function**: Brain-Computer Interfaces (BCIs) allow individuals with severe disabilities to communicate by translating EEG changes into control signals.
- **Challenges**: Neurological impairments hinder sensorimotor functions and communication, increasing the need for personalized rehabilitation.
- **Project Goal**: Our project aims to develop a non-invasive EEG-based BCI system for communication and rehabilitation.

BRAIN CONTROLLED DEVICE USING RASPBERRY PI AND LIDAR

- The "Brain Controlled Device Using Raspberry Pi and Lidar" project aims to develop a system that allows users to control devices through brainwave activity and eye movements.
- By utilizing an EEG headset to capture brain signals and the electrodes to capture eye

movements, the system processes these signals using a Raspberry Pi.
- The integration of Lidar technology enables precise spatial awareness and obstacle detection,
- allowing the device to navigate and interact with its environment.
- This innovative approach explores the intersection of neuroscience and robotics, showcasing potential applications in assistive technology and human-computer interaction.

EDUCATION

Post Graduate Program in Data Science and Gen AI
Great Lakes Institute of Management
Bangalore - 2025

BE/ B.Tech, Electronics and Communication – 8.0/10 CGPA
SJB Institute Of Technology, Bangalore
2019 – 2023

Pre-University (PCMB)
Mahesh PU College, Mangalore
2017 - 2019

Secondary Education
Jnanasagara International Public School
2016 -2017

CERTIFICATIONS

- Certificate In Computer Programming (CCP)

SKILLS

- Programming Languages: Python, NLP, SQL
- Machine Learning: Supervised Learning (Linear Regression, Logistic Regression, Decision Tree, Random Forest, Gradient Boosting, K-Nearest Neighbors), Unsupervised Learning (K-Means, Hierarchical Clustering, PCA, DBSCAN)
- Generative AI: LLM, RAG, Prompt Engineering
- Data Analysis: EDA, Feature Engineering, Data Cleaning, Data Integrity, Microsoft Excel
- Data Visualization: Power BI (PowerBI Desktop, Power Query, and PowerBI Service), Python (NumPy, Pandas, Matplotlib, Seaborn),Tableau
- Advanced Analytics: Statistical Hypothesis Testing, Statistical Analysis, Analytical Skills
- Amazon Web Service
- Soft Skills: Teamwork, Communication, Attention to Detail, Problem Solving

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PUBLICATIONS

ANALYSIS AND INTREPRETATION OF EEG SIGNALS FOR BCI APPLICATION [2022] -

International Journal of Information
