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Debmalya Ray
Data Scientist

SUMMARY

Highly motivated Data Scientist with 5+ years' experience in developing models using Machine Learning and Deep Learning techniques. Expertise in processing, cleansing and verifying data from multiple sources to make sure accurate results. Hands-on experience in analyzing huge datasets, building predictive models, and optimizing data solutions to solve complex analytics problems. Experience working on supervised and unsupervised learning practices like, classification, linear regression, clustering, neural networks on structured and unstructured datasets using Python and SQL. Excellent communication, analytical, and problem-solving abilities to interpret and report data insights and uncover hidden opportunities.

KEY SKILLS

Data Visualization, Data Science , Deep Learning, Time Series Analysis, Machine Learning, NLP, Artificial Intelligence, Statistical Analysis, Data Mining & Insights, Python - Programming Language

TECHNICAL SKILLS

Python Libraries - (Pandas, Numpy, Scikit-Learn , Scipy, Tensorflow, Matplotlib, Seaborn, Flask, Streamlit, Django), **IDE** - (Jupyter-Notebook, Anaconda-Navigator, MS VSCode)

CERTIFICATIONS/TRAINING

- Post Graduate Program (Big Data and Engineering) in 2021 from **NIT Rourkela,** (3.4/4) – Edureka
- Post Graduate Diploma In **Data Science** - **IIIT Bangalore** - (3.4/4)
- IBM Developer Skill Network - **Deep Learning using TensorFlow**
- EXIN certified Service Management **Foundation**

PROFESSIONAL EXPERIENCE

Technical Lead	Dec '18 - Dec '22
Infosys Technologies	Bangalore

- Develop and test **predictive analytics** models to gain insights from structured and unstructured data.
- Use **machine learning algorithms** (linear, ensembled, etc.) to uncover patterns and trends that lead to increased business efficiency and productivity.
- Analyze large volumes of data to uncover key trends and patterns that can be used to develop insights into customer behavior, preferences, product performance and other key areas.
- Design, implement, and evaluate data mining projects to create meaningful information from large datasets.
- Visualize data to inform **decision-making** and facilitate data-driven decisions.
- Respond to user feedback to refine and improve existing machine learning models.
- Develop and deploy customized machine learning models to meet specific requirements.
- Develop automated report generation to present data findings.
- Support the development and integration of machine learning solutions into existing data systems.
- Research and recommend appropriate **open source frameworks and technologies** to support machine learning initiatives.
- Keep up-to-date on the latest innovations in machine learning technologies and approaches

Consultant	Jan '18 - Nov '18
Atos SE	Bangalore

Basics of Unix , DB support

Solution Integrator	Jul '15 - Dec '17
Ericsson	Bangalore

Supported the application – Telecom (BSCS) and its end to end configuration/installation which includes 3 tiers (applications, LDAP server, database) in Test and Development Environment.

System Engineer	Mar '12 - Jul '15
TCS	Kolkata

Basics Of Unix , DB support . etc

EDUCATION

Masters Of Science - Data Science	Jul '23
Liverpool John Moores University	UK

Department - **Data Science**

Bachelor Of Technology	Apr '11
West Bengal University Of Technology - 8.36	Kolkata

Department - **Information Technology**

RESEARCH PAPER AND RECOGNITION

Received **9th International Millennium Impact Award 2023** as **'Best Emerging Researcher'** from **RJSET** and **Research Gateway**
for my work **'BOOK GENRE CLASSIFIC ATION'** using ML and NLP techniques.

ADDITIONAL INFORMATION / VOLUNTEERING EXPERIENCE

- Received **Infosys Accelerate Certificate** for contribution as Work Performer (Oct – Dec'21) and presented the accelerate problem in Tech meetup held in Infosys Bangalore DC campus
- **Machine Hack Analytics India** – Experts in Machine Learning – **Rank 144+ Globally**

PROJECTS

End to End Project - Book Genre Classification - NLP

Description: To propose the best text classification technique and perform a comparative analysis with various machine learning models so that a book can be categorized to its Genre from its Summary.

The set of **obje_ctives** are:
- To analyze and find out the text length, word count and average word length of each summary
- To suggest the best vectorization techniques.
- Analyze and compare various predictive models and evaluate their performances.
- To suggest the best hyper parameter and optimization techniques that can increase the model performance
- To deploy the model with UI forms using Flask Framework

Data Mining Water Table – Data Science Case Study

Description: To mitigate the scarcity of water and solve the problem regarding the depletion of the water table, there are various solutions proposed previously. The problem is not just confined to depletion issues but also to understanding the operating conditions of these water points.

Based on the aim, we have created a set of objectives as follows:
- To define the data frame suitable for the dataset
- To find out the best data cleansing and feature engineering techniques
- Scaling and Normalization techniques
- Checking if the dataset is balanced on not
- Using the best feature selection and model selection techniques
- Analyze and compare various predictive models and evaluate their performances
- To suggest the best hyper parameter and optimization techniques that can increase the model performance

Problem Statement: Classification of Medical Prescription Using NLP - POC

Description: To classify medical specialties based on the transcription text collected as a part of the data preparation stage. This also includes creating a detailed summary report using the mentioned below methodologies:

- Use of Stemming or Lemmatization Embedded Techniques
- Exploring the Neural Network with LSTM or RNN –Feed Forward Neural Network
- Use of python libraries – like Scikit - Learn, Keras and Tensor flow
- Classifying the target columns with desired labels
- Summary on BERT models.