TIASHA MONDAL

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Career Objective

Innovative and results-driven Post-graduate student with a 2 years of market research and fraud analysis experience working in a diverse, fast-paced, and agile environment, now seeking career transition to a Machine Learning role. With a strong academic foundation in Data Science, I aim to contribute my quantitative modelling and experimentation skills to enhance data-driven business solutions.

Work Experience

Accenture, Bengaluru, India
Application Development Analyst   *Dec 2021 - Aug 2022*

- Used Tableau and SQL to redefine and track marketing initiatives, providing recommendations on landing page layout, CTA placement, and design, resulting in a 30% boost in conversion rate.
- Performed Target Audience Segmentation by implementing clustering algorithms to identify distinct segments within the target audience based on demographic, psychographic, and behavioral attributes.
- Implemented Pricing Optimization through statistical analysis and regression modeling, based on the target audience to identify the impact of pricing changes on customer demand, resulting in a quarterly increase in sales revenue of $35.3 million.
- Collaborated with cross-functional teams using Bitbucket and Jira to manage code repositories, track project progress, and streamline issue tracking.

Application Development Associate   *Sept 2020 - Nov 2021*

- Evaluated daily data to find potential financial fraud patterns, identifying suspicious transactions and anomalies, and conveyed the information to the BI team which resulted in significant cost savings.
- Utilized SQL to retrieve or access seller accounts for profile evaluation and fraud history.
- Communicated complex data concepts to cross-functional teams and senior management through exceptional storytelling using Tableau for visualization.
- Participated in knowledge sharing sessions and training activities helping to build a collaborative and supportive work environment within the team.

*Recognition: **iChamp Beyond Boundaries Award** for innovative approach and demonstrating leadership.*

Technical Projects

Real-time Space Chatbot Agent – Natural Language processing (NLP)   *July 2023 - Present*

- Focusing on the improvement of conversational capabilities of a pre-built Space Chatbot Agent using RASA by enhancing NLU, expanding intents and entities, and refining response generation.
- Implementing new conversation scenarios and developing stories, actions, rules to enable chatbot awareness, allowing it to effectively handle inquiries about its capabilities and metadata information.
- Integrating information retrieval system by linking the chatbot to external APIs, databases, and structured knowledge sources (DBpedia, Wikidata, Freebase) to enrich chatbot's knowledge.
- Continuous training and deployment process, incorporating user feedback are used to improve chatbot's performance and deliver an exceptional conversational experience.

Student Scores Prediction – AWS, End to End Machine Learning Project   *May 2023 - Jun 2023*

- Demonstrated ability to manage End to End machine learning projects from inception to deployment on production AWS cloud using Docker, ECR, EC2 instances and CI/CD Pipeline.
- Developed and integrated key components, including Data Ingestion, Data Transformation, Model Trainer, Model Evaluation, Model Deployment.
- Conducted detailed Data analysis, EDA, Feature Engineering to investigate the impact of variables like Gender, Ethnicity, Test Preparation Course on student performance.
- Performed Data Visualization using histogram and Kernel Distribution Function (KDE).

Technical Projects

Global Wheat Detection – Object Detection   *Mar 2023 - Apr 2023*
- Evaluated performance of Faster R-CNN and DETR models on Kaggle Global Wheat Detection dataset to determine the optimal model for detecting wheat heads based on Intersection over Union (IoU) and mean Average Precision (mAP).
- Conducted comprehensive analysis of model accuracy, precision, recall for both the model.
- Employed rigorous training and evaluation methodologies, including data augmentation, cross-validation, and hyperparameter optimization.

Predict Top Genre and Popularity of Songs - Classification and Regression   *Feb 2023 - Mar 2023*
- Demonstrated proficiency in implementing Supervised Machine Learning models, including Logistic Regression, SVC, KNN, and Random Forest Regressor, to optimize performance.
- Implemented techniques such as clustering, and one-hot encoding for effective data pre-processing, enhancing model accuracy and robustness.

Energy Consumption – Time Series Forecasting   *Jan 2023 - Feb 2023*
- Improved energy consumption predictions by reducing RMSE by 15% by applying techniques like outlier removal, time series cross-validation of hourly energy consumption data.
- Developed an XGBoost model for accurate forecasting, incorporating feature visualization and lag features.

Facial Emotion Recognition – Computer Vision   *Nov 2022 - Dec 2022*
- Developed a Deep Convolutional Neural Network (CNN) for facial expression recognition, achieving an 80% accuracy rate.
- Optimized the CNN model through hyperparameter tuning, resulting in reduced training and validation loss.

Technical Skills

- **Programming Languages:** Python, SQL, HTML, CSS, JavaScript
- **Data Science Stack:** TensorFlow, Keras, PyTorch, NumPy, Pandas, Matplotlib, Scikit-learn, spaCy
- **Data Analytics Stack:** Excel, Tableau
- **Databases:** MySQL, NoSQL (MongoDB)
- **Cloud Technologies:** AWS S3, AWS ECS, AWS ECR, AWS Elastic Beanstalk
- **Miscellaneous:** Docker, regex101, LINUX, GIT, JIRA, Bitbucket, Jupyter Notebook, VS Code

Education

Master of Science: **Advanced Computer Science with Artificial Intelligence**   *Sept 2022 – Present*
University of Strathclyde, Glasgow, United Kingdom

Bachelor of Technology: **Electronics and Computer Science**   *Jun 2016 – May 2020*
Kalinga Institute of Industrial Technology, Bhubaneswar, India

Volunteering Work

Liberty United Society (KIIT University)   *Sept 2016 – Apr 2020*
Team Member
- Visited local schools and delivered presentation on equality, non-discrimination, and basic human rights, empowering students to become advocates for social change.
- Organized workshops in community centers, fostering dialogue and addressing social issues to promote inclusivity and raise awareness about human rights challenges in the local community.