LOKESH AGGARWAL

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PROFESSIONAL SUMMARY

*Dedicated Data Scientist with a **master's in data science** from Monash University and **2+ years of experience** in machine learning, deep learning, time series analytics, and big data processing (Python, PySpark, and Databricks). Passionate about developing predictive models, mastering emerging technologies like Large Language Models (LLMs), and delivering impactful, data-driven solutions.*

SKILLS

PROGRAMMING	Python (Scikit-Learn, Pandas, NumPy, SciPy), SQL and R
DATA VISUALIZATION	Tableau, Power BI, Matplotlib, Seaborn
MACHINE LEARNING	Supervised & Unsupervised Learning, Predictive Modelling, Hyperparameter Tuning, Feature Engineering, Random Forests, Extreme Gradient Boosting, PCA, Expectation-Maximization Algorithm
DEEP LEARNING	Neural Networks, TensorFlow, Keras, Word2Vec, CNNs, RNNs, Attention Mechanism, Auto-Encoders, Transformers (BERT, GPT, T5), Transfer Learning, Neuro-Linguistic Programming and LLM models (Fine-tuning, Hugging Face)
CLOUD & BIG DATA	Azure Databricks, Azure Machine Learning Studio

WORK EXPERIENCE

MONASH UNIVERSITY — Melbourne, Australia
Summer Research Intern — *Dec 2023 – Mar 2024*

- Implemented advanced Machine Learning algorithms to Game Theory applications in self-defence sports such as Mixed Martial Arts.
- Orchestrated new features using Game theory's payoff matrix calculation frameworks leading to a 10% improvement in F1 Score.
- Applied ensemble techniques (e.g. random forests) & neural networks (with hyperparameter tuning) improving fight outcome prediction accuracy by 15%.

FAREPORTAL INDIA PVT. LTD. — Gurugram, Haryana, India
Data Analyst — *Oct 2020 – Jun 2022*

- Maintained the data-driven 'Fareportal Dash' dashboard.
- Performed preprocessing and wrangling of complex data formats and increased dashboard efficiency by 10%.
- Enabled seamless real-time data updates to improve the accuracy of insights displayed on dashboards.
- Optimized database querying to ensure efficient and reduced report load time by more than 50%.

FAREPORTAL INDIA PVT. LTD. — Gurugram, Haryana, India
Software Engineer — *Apr 2020 – Sep 2020*

- Developed and maintained automation scripts for compliance testing with a benefit of 2 FTE.
- Worked with automation testing frameworks such as Selenium with Python, cutting testing time by 40%.

PROJECTS

A.EYE – An approach to Early Childhood Education — Monash University

- Developed a children game of object recognition and learning through surroundings using the custom-labelled COCO dataset.
- Applied transfer learning with SOTA CNNs such as YOLO-NAS for object detection in images, achieving a **65% prediction accuracy**.
- Ensembled the transfer learning model further with YOLO**, improving prediction accuracy (for bounding boxes) from 65% to 82%.**

Customer Churn Prediction — Monash University

- Implemented Random Forest with hyperparameter tuning via GridSearchCV, achieving an F1 score of 0.62, outperforming Logistic Regression and XGBoost by 15%.
- Engineered new features by **tokenizing and lemmatizing of textual data** from the customer's saved profile and conversations.
- Addressed class imbalance problem using SMOTE, generating synthetic samples for the minority class, and enhancing **minority class prediction precision by 10%.**

AMIBO – Facial Emotion Recognition Bot — GGSIP University

- Implemented facial emotion recognition pipeline using a **self-devised HADER methodology**, enabling detection of seven basic emotions with **0.86 F1 Score**. (Research Paper: 10.1080/02522667.2020.1802122)
- Engineered feature vectors by calculating 37 angles and distances between facial landmarks, improving classification accuracy by 8% compared to the previous works.
- Designed an ensemble model integrating logistic regression, SVM, and MLP for emotion classification, **achieving an accuracy of 99.63% on CK+ dataset and 98.64% on KDEF.**

EDUCATION

Master of Data Science	*Monash University, Melbourne, Australia*	*(July 2022 – Sep 2024)*	GPA: 3.8/4
B.Tech. (Computer Science)	*GGSIP University, Delhi, India*	*(Aug 2016 – Jun 2020)*	GPA: 9.2/10

CERTIFICATIONS

- Microsoft Certified Power BI Data Analyst Associate (PL-300)
- Machine Learning & Data Analytics (TechExplica)