Krishan Gupta

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EXPERIENCE

Data Scientist *Sep 2024 – Present*
Canadian Tire Financial Services (Canadian Tire Bank) *Oakville, Canada*
- Facilitated the bank's transition from SAS-based credit scoring models to Python-based models, significantly reducing the model development time and expediting the training process for scorecard models.
- Identified the causes of performance degradation in a credit scoring model developed in 2017 and successfully refactored the scores, ensuring the model's deviation from the benchmark fell within acceptable limits.

Graduate Research Assistant (Data Science) *Feb 2024 – Aug 2024*
McGill University *Montreal, Canada*
- Developed and deployed a computer vision model made using the Gemini API for animal identification in the Amazon rainforest, integrated with Google Cloud via CI/CD pipelines for storing output in Big Query database
- Implemented ETL processes to handle data transformation and loading, ensuring efficient data flow from image captures to model input.

Data Scientist *Sep 2023 – May 2024*
Proctor & Gamble *Toronto, Canada*
- Performed regression analysis on historical marketing campaigns to optimize budget allocation for maximizing ROAS (Return on Ad Spend), leading to estimated annual savings of over 200,000 CAD
- Trained and deployed a LightGBM Model in Databricks using model serving features and MLOps techniques to predict customer trade-up paths, resulting in a 10% increase in revenue per customer by increasing customer engagement

Data Scientist *Dec 2022 – July 2023*
Protium Finance (A Non-Banking Financial Fintech Company finances Small and Medium Scale Businesses) *Bengaluru, India*
- Applied clustering algorithms for customer analytics and segment customer risk profiles, expanding the customer base by 60%
- Developed a Business Intelligence dashboard in PowerBI to identify delinquent customers, reducing EMI bounce rates by 20%
- Analyzed text data to compare thousands of credit score reports from different credit bureaus, resulting in a 30% cost saving by selecting a cost-effective bureau and enhancing business performance

EDUCATION

McGill University, Desautels Faculty of Management *Montreal, Canada*
Master of Management in Analytics | GPA: 3.66/4 *July 2023 – Aug 2024*
- Awarded an entrance scholarship award of $8000
- MMA Representative, McGill Case Competition Association (MCCA)

Relevant Coursework: Advanced Data Science Concepts, Machine Learning, Deep Learning, Statistics, Data Mining, Data Visualization, Computer Vison, Cloud Computing, Artificial Intelligence, Ethics, Data Modeling, Data Analytics

Delhi Technological University (formerly Delhi College of Engineering) *Delhi, India*
Bachelor of Technology (B.Tech.), Mechanical Engineering | GPA: 8.01/10 *Aug 2014 – July 2018*
Relevant Coursework: Information Technology, Programming in C, Mathematics, Numerical & Quantitative Techniques

PROJECTS

Customer Churn Prediction Using Ensemble Models | *XGBoost, Data Pre-Processing, json, CSV, Matplotlib, Data models*
- Developed and implemented an XGBoost machine learning model for customer churn prediction in the telecommunications industry. Achieved 75.8% accuracy in identifying potential churners, enabling proactive retention strategies for better customer service. This data-driven approach could result in a 15% reduction in customer attrition and an estimated $500,000 annual savings in customer acquisition

Comments Toxicity Analysis | *NLP, TensorFlow, Vector Embeddings, TF-IDF, NumPy, Deep Learning, big data modeling*
- Built an end-to-end Multiclass Classification deep learning model using TensorFlow to accurately classify varying levels of comment toxicity, addressing challenges in natural language processing. This project significantly contributes to safer environments by enabling platforms to automatically detect and mitigate toxic behavior, enhancing user interactions and compliance with digital civility standards.

Retrieval Based Chat System | *RAG, LangChain, Vector Database, FastAPI, Llama3, OpenAI ChatGPT, Big Data technologies*
- Engineered an advanced language-based retrieval system using Streamlit and Langchain, integrating technologies like Llama embeddings and FAISS vector storage to enable efficient document search and contextual chat responses. Applications in e-commerce is promising.

Finetuning Transformer for Text Classification | *PyTorch Lightning, tokenizer, Transformer Finetuning, advanced analytics*
- Developed and fine-tuned a GPT-2 transformer architecture using PyTorch Lightning, integrating a classification layer and importing pretrained weights to enhance text document classification. Achieved high accuracy in categorizing news articles

TECHNICAL SKILLS

- **Languages:** Python, SQL (Postgres, MySQL), R, Spark (PySpark, SparkSQL), NoSQL
- **Libraries:** Pandas, NumPy, matplotlib, Scikit-learn, NetworkX, MLFlow, PyTorch, OpenAI, huggingface, LangChain, LlamaIndex
- **Cloud Tools:** Azure Cloud, Amazon Web Services (AWS), Google Cloud (GCP), Databricks (Data Lake), Microsoft Fabric, Snowflake
- **Frameworks:** Flask, FastAPI, Docker, Git version Control, CI/CD, PowerBI, Tableau, Alteryx, Airflow, Cloud(S3, RDS Database, Lambda, Sagemaker, CLI, EC2, Cloudshell, Microservices) Jupyter, Kafka, Postman, Excel, Kubernetes, DevOps, MLOps, Deep Learning (LSTM, RNN, CNN, ResNet, Transformers, LLM, CUDA GPU), DSA, Data Structures, Terraform
- **Soft Skills:** Time Management, Cross functional Collaboration, Communication Skills, Agile (Scrum, Kanban), Jira, Confluent
- **Certifications:** Azure Data Scientist Associate (DP100), Microsoft Fabrics Analytics Engineer Associate, Databricks Lakehouse Fundamentals, Generative AI (GenAI) Fundamentals, AWS Cloud Practitioner, AWS Solutions Architect Associate, AWS Machine Learning Engineer Associate