

Hardik Munjal

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SKILLS

Domain: Predictive Modeling, Computer Vision

Technical Skills: Python, R, SQL, Statistical Analysis, Machine Learnings, Deep Learning, TensorFlow, Microsoft Power BI, Microsoft Azure, MLOps, Git, Agile Development

Databases: MySQL, PostgreSQL, NoSQL

PROFESSIONAL EXPERIENCE

Data Scientist, Canada Life | London, Ontario Sep 2023 – Present

- Spearheading accelerated underwriting initiative in the insurance department, focused on identifying misrepresentation of smoking and BMI information by applicants to ensure accurate risk assessment.

Data Scientist, Agriculture and Agri-Food Canada (AAFC) | Ottawa, Ontario May 2023 – Aug 2023

- Developed a streamlit-based de-duplication tool using clustering algorithms (DBSCAN, Hierarchical clustering) to streamline document processing and increase productivity, resulting in significant time and cost savings.
- Leveraged opencv, transfer learning (on ResNet50 architecture), and streamlit to create a powdery mildew detection application with 98% accuracy on the test dataset for crops in a greenhouse setup, enabling effective disease control and optimized crop yield through timely treatment and proactive management.

Data Scientist, Eaton India Innovation Center | Pune, Maharashtra Apr 2021 - Aug 2022

- Spearheaded data wrangling and exploratory data analysis on a 10-year dataset of 600 UPS with 20 parameters to ensure data accuracy and completeness. Designed experiments and performed time series analysis to validate shifts and detect degradation in power components. Utilized this analysis to develop a robust change point detection algorithm, enabling the identification of power component failures and communicating the results to stakeholders using PowerBI.
- Deployed a serverless UPS monitoring solution on Azure Functions, leveraging Azure Key Vault, Azure MySQL, and Blob Storage. Streamlined deployment time from 4 hours to 20 minutes by implementing Linux scripts.
- Led a comprehensive workshop on H2O Driverless AI, an AutoML Tool, for a large audience of data scientists.

Consultant, Hitachi Consulting | Pune, Maharashtra Aug 2019 - Apr 2021

- Created an MLOps pipeline application using MLflow and Seldon-core, reducing deployment time by 60% and enabling Data Scientists to deploy models on Kubernetes clusters effortlessly. This decreased the dependency on DevOps engineers and improved efficiency in model deployment processes.
- Led a pivotal project aimed at precisely extracting vital details from a range of transport documents, encompassing critical data such as addresses, dates, and invoice numbers. Utilized a strategic combination of AWS Textract, NLTK, and Spacy to orchestrate an efficient text processing and named entity recognition (NER) strategy. Achieved a commendable 80% accuracy in autonomously identifying and extracting key fields.
- Analyzed 5GBs of raw manufacturing data to develop predictive models using gradient boosting algorithms (XGBoost and LightGBM), achieving an f1-score of 78% and enhancing accuracy in the tire manufacturing process. Implemented machine learning interpretation techniques, such as Shapley values (SHAP) and K-LIME, to gain insights into local feature importance (machine-level) given by the model.

Associate Innovation Engineer, Zensar Technologies | Pune, Maharashtra Jul 2018 – Jul 2019

- Optimized navigation performance for a self-driving golf cart prototype by collecting and labelling data and developing models to predict steering angle and perform real-time scene segmentation. Utilized Convolutional Neural Networks (CNNs) and trained the models with high-quality labelled data, achieving 78% accuracy for steering angle prediction and 70% accuracy for scene segmentation.
- Devised a robust Convolutional Neural Network (CNN) architecture for accurate customer footfall detection, achieving 89% accuracy. Utilized TensorFlow to build and train the CNN model, enabling businesses to optimize product placement and inventory management.
- Built a facial recognition-based attendance and security system for over 40 employees, utilizing technologies such as OpenCV and deep learning framework - TensorFlow. Achieved 79% accuracy in facial recognition, ensuring reliable attendance tracking and enhanced security measures.

EDUCATION

Western University | London, Ontario

Sep 2022 - Aug 2023

Master of Data Analytics

Relevant Courses: Statistical Modeling, Advanced Data Analysis, Machine Learning, Databases, Banking Analytics, Natural Language Processing