INZAMAM UL HAQ

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Location: Bangalore

Career Objective

Dynamic and results-oriented AI/ML Engineer with 4 years of experience in designing, developing, and deploying AI and machine learning solutions to solve complex business challenges. Proficient in leveraging a wide range of technologies and deep learning methods to drive innovation and business growth. Seeking a challenging position to apply and expand expertise in computer vision, machine learning, and AI in a collaborative environment.

Skills

- **Programming Languages and Libraries**: Python, NumPy, Pandas, Matplotlib, Seaborn Scikit-learn
- **AI/ML**: Supervised and unsupervised learning, deep learning, natural language processing (NLP), computer vision, large language models (LLM), RAG, LangChain, CNN, RNN, ANN, NLTK, spaCy
- **Databases**: Oracle, MySQL
- **Tools & Frameworks**: TensorFlow, keras, Azure, GitHub, Jira, SQL/NoSQL databases
- **Data Processing**: Data cleaning, pre-processing, feature engineering
- **Statistical Analysis**: Hypothesis testing, regression analysis, time series analysis
- **Deployment & Integration**: Model deployment and integration with web applications

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Professional Experience

Software Engineer (Role: Data Scientist)
Client: ADE Bengaluru | CIPL, Bengaluru
Jan 2022 – Mar 2023

- Designed and implemented machine-learning models for product recommendation algorithms, resulting in a 20% increase in conversion rates.
- Developed a deep learning model for image classification, achieving 95% accuracy and reducing manual review efforts by 80%.
- Conducted exploratory data analysis (EDA) to identify insights and trends, aiding in strategic business decisions.

Software Engineer (Role: Data Scientist)
Client: ADE Bengaluru | Thunder Force, Bengaluru
June 2021 – Dec 2021

- Built predictive models using time series analysis and regression, enhancing inventory management efficiency by 30%.
- Implemented NLP algorithms for sentiment analysis of customer reviews, providing actionable feedback for the marketing team.

Software Engineer (Role: Data Scientist)
Client: ADE Bengaluru | Caravel, Bengaluru
Oct 2020 – Feb 2021

- Assisted in designing and implementing data pipelines for ETL processes.

Software Engineer (Role: Data Scientist)
Client: ADE Bengaluru | Bee Gee, Bengaluru
Oct 2018 – June 2020

- Collaborated with cross-functional teams to translate business requirements into analytical solutions.
- Developed predictive models for regression and classification problems.

Project Experience

Project 1: TAPAS Project (UAV)
Computer Vision Project (CNN)

Description: Image matching has been a significant research focus due to advancements in imaging technologies and processing resources. The TAPAS project explored deep learning methods for cross-domain capability, leveraging multispectral devices (CCD, IR and SWIR) and public satellite imagery for robust vision-based navigation. This project involved developing and augmenting standard aerial datasets for cross-platform matching and semantic segmentation. A two-step image-matching framework were carried out, incorporating with coarse-matching through CNN and then fine-tuning image-matching algorithms using spectral, temporal, and flow features.

Key Highlights:

- Developed algorithms for identification and localization of man-made regions.
- Built a cross-platform image dataset from aircraft and satellite imagery.
- Created a two-step image-matching framework.

Roles and Responsibilities:

- Analyzed project requirements and designed the workflow.
- Developed video annotation systems (CVT, Sub-IVP and IVP).
- Implemented video tracker systems for object detection.
- Collaborated with principal scientists on new machine learning methods.

- Developed machine-learning algorithms, conducted data analysis, and maintained large databases.
- Performed regression analyses between UAV data and satellite imagery.
- Enhanced real-time video with annotated flight data.

Project 2: UAV Collision Detection and Avoidance System
Computer Vision and Deep Learning Project (CNN)

Description: This project focused on creating a collision detection and avoidance system for UAVs using computer vision and deep learning. The solution processed live video streams from UAV cameras, detecting and predicting potential obstacles using a CNN-based model for enhanced navigation. The project integrated real-time data processing and machine learning models to improve UAV reliability.

Key Highlights:

- Built and trained a CNN model for real-time obstacle detection using the YOLOv8 framework.
- Implemented video tracking algorithms to monitor dynamic obstacle movements
- Integrated UAV navigation parameters for predictive analysis of potential collisions.
- Employed data augmentation techniques to enhance model performance.

Roles and Responsibilities:

- Collected and labeled extensive video datasets for model training.
- Developed and optimized object detection algorithms using YOLOv8.
- Integrated video tracker systems and optimized processing efficiency.
- Conducted functional testing to troubleshoot system performance issues.
- Collaborated with research teams to implement advanced deep learning methods and correlated UAV navigation data with real-time object detection results.

Project 3: Retail Fraud Detection with Machine Learning

Description: Engineered a machine learning system to identify and flag fraudulent retail transactions in real-time using sophisticated modeling techniques. The project encompassed end-to-end data preprocessing, feature engineering, and model development to enhance fraud detection capabilities.

Key Highlights:

- Utilized Random Forest and XGBoost algorithms for high-accuracy anomaly detection.
- Integrated an automated alert mechanism with dashboard notifications for stakeholders.
- Employed feature engineering to improve model precision and recall rates.
- Conducted comprehensive model evaluation with regression analysis for validation.

Roles and Responsibilities:

- Analyzed transaction data and collaborated with business analysts to identify fraud patterns.
- Preprocessed and transformed data for optimal model training.
- Constructed and fine-tuned machine-learning pipelines.
- Developed an alert system integrated with dashboards for real-time notifications.
- Worked closely with stakeholders to align model outputs with business requirements.

Project 4: Customer Care Call Summary Alert

Description: Develop a concise notification system that highlights key points and outcomes from recent customer service calls. This AI-powered Customer Care Call Summary Alert aids quick understanding and response, enhancing customer support efficiency.

Key Highlights:

- Enhance efficiency enables customer service teams to respond promptly to inquiries.
- Improve strategy to optimize resources, address concerns with customer demands.
- Retain customers by addressing issues proactively which builds trust.
- Personalized customer experiences and customer satisfaction.

Roles and Responsibilities:

- Design an alert system for summarizing customer care calls.
- Implement Natural Language Processing techniques to extract key insights.
- Ensure timely and accurate delivery of call summaries to support staff.

Publications & Conferences

- Published a paper titled *"Enhance Performance of De-duplication in Primary Storage System in Cloud using DC algorithm."*
- Attended the IEEE Workshop on Applications and Research Directions in Big Data.

Education

- **Master of Technology in Computer Science**
  Visvesvaraya Technological University, Bengaluru | 2017
- **Bachelor of Engineering in Computer Science**
  Visvesvaraya Technological University, Bengaluru | 2015