

HARSHAV KUMAR

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Innovative ML Engineer passionate about crafting AI solutions that boost efficiency and drive innovation across industries.

Professional Experience

Quantiphi Analytics Solution Private Limited

Bengaluru, India

Senior Machine Learning Engineer

06/2022 – Present

- Engineered AI solutions for financial services and insurance, resulting in a 15% boost in operational efficiency and a 60% reduction in loan claim processing time.
- Architected and deployed enterprise-scale, real-time cloud solutions on Google Cloud Platform (GCP) using custom AI models and high-throughput data pipelines.
- Developed and integrated custom evaluation metrics for document extraction models, enhancing model selection and performance tracking.
- Automated insurance document processing (Loss Run, SOV, RFP, Census, Acord, Policy documents) using advanced machine learning and computer vision techniques.
- Built and deployed Relation Extraction Models for insurance document processing, improving information extraction accuracy and completeness.
- Leveraged cutting-edge LLMs and Generative AI to enhance complex information extraction from insurance documents.
- Deployed small LLM models with quantization for efficient inference on edge/cloud, reducing latency and resource consumption.
- Implemented CI/CD pipelines for model deployment using Docker, Kubernetes, and GCP services, ensuring robust, automated, and scalable ML operations.

RMgX Technologies LLP

Gurugram, India

Machine Learning Engineer

09/2019 – 05/2022

- Achieved 0.82 IOU on object masking algorithm by developing a custom model.
- Generated 50,000 synthetic data samples to augment training dataset for custom license plate detection and recognition model training.
- Attained 0.4 CER on license plate character recognition by training on synthetic data.
- Reduced average waiting time of students by 40% on online proctoring-based exams by integrating face recognition, camera tampering detection, and speech detection in existing platform.
- Improved handwriting recognition model by utilizing Dilated CNN and multi-directional LSTM decoder, achieving 0.72 CER.
- Enhanced performance of SOTA models on crowd density estimation by 60% through developing a multi-patch ensemble.

Technical Skills

Programming & Frameworks: Python, C/C++, MySQL, TensorFlow, PyTorch, Keras, Scikit-learn, OpenCV, Hugging Face Transformers

MLOps & Development Tools: Docker, Git, Flask, REST APIs, LangChain, LlamaIndex, Kubernetes, Kubeflow

Cloud Platforms: Google Cloud Platform (Cloud Run, Pub/Sub, GKE, Cloud Tasks, Compute Engine), Amazon Web Services (EC2, EKS, SQS)

AI Specializations: Computer Vision, Natural Language Processing, Deep Learning, Document Digitization, Information Extraction, Document Classification, Image Classification, Object Detection, Semantic Segmentation, Generative AI, Large Language Models, Retrieval Augmented Generation (RAG)

Awards & Recognitions

- R&R 2025 FSI business unit Annual Rewards:** Rising Star Award January 2025
- H1 2024 Duration Winner:** Kaizen October 2024
- Q2 2023 Duration Winner:** Kaizen (Fish Eye) February 2024

- **Q1 2022 Duration Team Winner:** Avengers and Justice League January 2023
- **Q1 2023 Duration Team Winner:** Avengers August 2023
- **Q1 2023 Duration Nominee Team Winner:** Kingsmen August 2023
- **Q2 2022 Duration Team Winner:** Group of Talent (G.O.T) August 2023
- **Q2 2023 Duration:** SPOT Award October 2023
- **Winners:** RMgX Productathon December 2019 & 2021
- **Innovator Title:** RMgX Technologies Annual Star Performer May 2021

Papers & Publications

Automated Table and Entity Extraction from XLSX Documents using Generative AI(yet to be published)
Patent

Controversy Probability Prediction on Twitter Corpus October 2020
ITEE Journal

Door Security using Face Detection and Raspberry PI March 2018
IOP Publication

Education

Birla Institute of Technology and Science (BITS Pilani) Pilani, India
Master of Technology in Artificial Intelligence and Machine Learning 2025

B.K. Birla Institute of Engineering and Technology Pilani, India
Bachelor of Technology in Computer Science and Engineering (Honours) 2019