

## EDUCATION

Amity University , Jaipur

Aug. 2016 - Aug. 2020

B.Tech -Computer Science (Major)

## ACHIEVEMENTS

Artificial Intelligence and Machine Learning  
Workathon 2021—**1st Runner-Up** Issued by  
Microsoft Global Partner Solutions (GPS)

## SKILLS

**Expertise :** CNN, DNN, YOLO, DeepSORT,  
Image Segmentation, Auto Encoders,  
image-classification, VideoAnalysis, Data  
Mining, Object Detection,Text Classification,  
LLMs, Transformers, Text Analytics, NER,  
Prompt Engineering

**Language** - Python

**Libraries** - OpenCV, NumPy, Pandas, Sklearn,  
Keras, Rasa, TensorFlow, Keras, NLTK, etc.

**Cloud** - Azure, GCP & AWS

**Databases** - SQL Server, Postgresql

## CERTIFICATES

- Machine Learning A-Z™
- Machine Learning With Deep  
learning and AI
- Deep learning A-Z™

## PERSONAL PROJECTS

### Image Enhancement [GitHub]

CNN model to enhance any text  
document image

### Face keypoint -[GitHub]

CNN model to extract Facial  
KeyPoints

### Face recognition attendance system [GitHub]

LBPH based face recognition based  
attendance app.

### Captcha Desnoising and OCR

Autoencode to remove noise from  
captcha and custom ocr

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## SKILLSET INTRODUCTION

- Proficient in deep learning, image segmentation, and classification, with expertise in synthetic data generation and custom augmentation for enhanced model training.
- Experienced in end-to-end AI product development and deployment, ensuring optimized real-world performance.

## EXPERIENCE

### Axiom Technologies LLP | Data Scientist Consultant (Computer Vision and AI)

Sept 2021 - Present | Mumbai, India

- Developed and deployed deep learning models using YOLO, LSTMs, CNNs, and OCR for computer vision and NLP applications. Worked on large-scale AI solutions, including document processing, call analysis, and knowledge-based Q&A systems.
- Deployed cutting edge AI solutions at India's largest banks and NBFCs.

### VGL Group | AI ML ENGINEER

Jan 2020 - Aug 2021 | Jaipur, India

## PROJECTS

- **Accidental car damage Detection and cost estimation.**
  - Make model classification. Color classification. Viewpoint classification.
  - YOLO v11-seg for part segmentation.
  - fine tuned-SAM2s for sub-parts, scratch and dent segmentation.
  - 360 video support. Multi-perspective image analysis.
- **Aadhaar Masking for Banking And Finance services.**
  - YOLOv5, Unet, custom OCR (CTC decode). Custom CNNs.
  - **Deployed and live in production with an accuracy exceeding 99%**
- **Signature Extraction and Verification (Conv-LSTM Custom Network).**
  - YOLOv5 for signature detection, Image enhancement using Autoencoder Network
  - Along with variable size Sliding window template matching for Verification.
  - **Deployed and live in production with an accuracy exceeding 90%**
- **Text Document Tilt Correction ( 0° - 360° ).**
  - Text detection using YOLOv5, Text ROI angle determination, trained with 100% synthetic data.
  - **Nearly 100% accuracy even on average quality Images & used in multiple projects by the team**
- **KYC Document Data Extraction.**
  - YOLOv5 for KYC detection, tilt correction, Paddle OCR for text extraction
  - **Deployed on Client's Server as an On-Prem Solution**
- **Handwritten & Printed form Data Extraction.**
  - Form detection using YOLOv5 & text extraction. + Tilt-Correction using OCR Output.
  - **Strings & Coordinates Data Parsing** to extract data.
  - **Deployed and live in Production.**
- **Knowledge Base Q&A and Document Analysis.**
  - vector embeddings using 'multi-qa-mpnet-base-cos-v1' and 'all-MiniLM-L6-v2'
  - Utilized GPT3.5-turbo-16k to generate answers from the filtered data.
  - user-defined Json based text analysis.
- **Call Center Call Analyser.**
  - OpenAI-Whisper for audio transcription, GPT-4 for call classification and analysis
- **Similar Image Search System on 54K images with**
  - 0.74 sec search time on 32 core GCP (clustering, resnet50 vector similarity).
- **Face identity & expression recognition system (LBPH, expression classification).**
  - Facial expression analysis of the sales executive at TJC-UK and SHOP-LC
- **Product Recommendation System ( apriori, image & attribute similarity).**
  - based on frequently bought together items. And their attributes.
- **Web-Scraping (selenium)**
  - Competitor and product performance analysis.

