

Yogendra Yatnalkar

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Education:

BE in Information Technology

Mumbai University (Fr. CRCE) – (2016 - 2020)
CGPA: 8.75

Experience:

Quantiphi Analytics:

- Worked on **7+ POC's, 2 Production deployment, 1 Product & 5+ RnD.**

- Other responsibilities include: **Pre-Sales Engineer (9+ sales deal)**, mentor and interviewer.

- **Sr. Machine Learning Engineer**
(March '22 - Present)

- **Machine Learning Engineer**
(August '20 - Feb '22)

Budsta Analytics:

Anomaly and breakdown detection on industrial machine video sequences.

- **Computer Vision Intern**
(January '19 - March '19)

Certification:

AWS:

- **Machine Learning Speciality** (Dec '21)
- Solution Architect Associate (Nov '20)

GCP:

- Associate Cloud Engineer (Dec '20)

Nvidia:

- **2 certificates** → Numba, Triton

Awards and Recognition:

Quantiphi:

- **Trained 16+ interns** in 3 years
- **Top 5 campus ML Interviewer**
- **Award: Q's Think-Tank** (3 times)

BE College (Fr.CRCE):

- Excellence in **Applied Mathematics**
- **Team-Leader** in SIH 2019
(Worlds Largest Hackathon)

Extra-Curricular:

- **AWS Community Builder** (2022 - Present)

Skills:

Core Skills: Computer Vision, ML on AWS, MLOps, SageMaker, Drift & Explainability, SQL, Churn Prediction, Docker

Experience on: Python, Pytorch, TF2, OpenCV, XGBoost, Shapley, AWS, GCP

Industry Projects: (POC - Proof of Concept, CV - Computer Vision)

Car Image Processing - Saliency segmentation, GAN, Matting & more:

- **Segment** the salient car from the parking lot → **add shadow** below it → **register** it on any background template.

- **Tagging:** Led a team of **4 taggers** for **5 weeks**. Tagged **7000+** images.

- **Trained** segmentation model (**U2Net**) for **7 days** on a **single GPU**.

- Researched and trained a custom **GAN model for shadow generation**.

- **Multi-GPU training** using Horovod and Pytorch DP/DDP

- **Turned 80 thousand dollars POC to 1 Million+ dollars project**

- **Keywords:** CV-POC, Segmentation, GAN, **OpenCV, Pytorch, AWS**, Tagging

Building RAG and LLM based chatbots on AWS:

- Developing **product recommendation chatbot** for a leading **ecommerce company**.

- Experimented with various **LLMs using AWS Bedrock**.

- Developed a hybrid search module using **AWS OpenSearch**.

- **Prompt-Engineered** the LLM for various conversation branches like: **casual-chat, prompting users for more info., fetching lost context, etc.**

- Structured data querying for better recommendation (**LLM to SQL generation**) using AWS Athena

NeuralOps - Quantiphi's MLOps Product on AWS cloud:

- **Core Member** during product development. Developed **end-to-end MLOps components** and **pipelines** for image classification tasks using **AWS** (mainly **SageMaker**) and **Airflow**.

- **MLOps Components:** Processing, Training, Monitoring & Explainability

- **MLOps Pipelines:** Training, Batch & Real-time inference, Drift Detection

- Used **KS Statistic test** and **Entropy** for Computer Vision **drift detection**

- **Guiding** the **Q's GCP team** for migrating this product to GCP cloud

- Technology Stack: AWS (**SageMaker**), **Airflow**, SageMaker Pipelines, TF2

Churn Prediction for a global Ed-Tech firm:

- **Problem:** Predict if student will fail the exam in next 2 weeks and churn

- Processed more than **1.5 TB of CSV data** using **SQL on AWS Athena**

- Developed multiple **Gradient Boosting models** like XGBoost, LightGBM and achieved **82% accuracy, 81% recall and 90% precision**

- Generated **explainability** using **Shapley values**

Media Industry: Large Scale Audio-Video Deduplication

- **Deduplication** of audio and video assets across **90 TB of data**

- Extensively used **FFMPEG on GPU** for separating data-streams, video-transcoding and converting stereo-audio to mono-audio.

- Used **FAISS library** for efficient storing and searching of frame embeddings

- Performed clustering on **similarity-matrix of 2 videos**

Few Other Projects:

- **Document Translation Pipeline** using **GCP Cloud (Production Deployed)**

- Developed a platform for **text-2-video** generation (**github: storyboard-ai**)

- **Brand identification** on wide ad-boards in sports game **video streams**

Industry Research:

- **Promptless Task-specific finetuning of MetaAI SAM, Multi-Task Learning**

- **Backtracking AWS** Lookout For Vision service: (AWS recognized me for this)

- Explored **Tensorflow 3D, Entropy** for Drift-Detection

- **NLP:** Hosting of LMs on **AWS Inferentia Instance vs Nvidia GPUs**

- Researching capabilities for **DinoV2, SAM and ImageBind ML models**