

AMAN LONARE

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PROFESSIONAL EXPERIENCE

Data Scientist and Engineer | Archetype Studio, Tokyo, JPN *Aug'23 – Present*

- **Establishing MLOps Framework to Enhance Android and iOS Specific Model Performance**
 - Architected & deployed production ML platform, processing 1M+ daily predictions for 500K+ users
 - Reduced integration time for new models from days to hours & increased deployment frequency from bi-annual to monthly by setting up CI/CD pipelines using **Amazon Sagemaker tools**
 - Cut incident response time by 50% through custom monitoring system built with SageMaker **Model Monitor**
 - Achieved 40% faster training speeds by implementing **distributed training** using **SageMaker DDP**
 - Improved model accuracy by 23% & reduced corrections by 25% through semi-automated continuous retraining
- **AI-Driven Edge Computing System for Multi-Modal Transportation Classification**
 - Designed and developed an **edge-based transportation mode detection system** for iOS platform serving 500K+ users with 1M+ daily predictions, achieving 99.3% accuracy in classifying 15 transportation modes
 - Optimized model footprint by 90% through hierarchical ML architecture while maintaining inference latency
 - Built cross-platform ML pipeline with m2cgen to convert Python models to native Dart, preserving performance
 - Reduced AWS costs by 70% by migrating ML inference to edge devices via **Flutter implementation**
 - Engineered background processing system for continuous monitoring without active app usage, improving UX
 - Reduced operational costs 60% by implementing local feedback caching to eliminate OpenStreetMap API calls
- **Optimizing the Performance of MySQL RDS Database**
 - Facilitated a 60% reduction in MySQL RDS costs by leveraging SysBench performance testing tool
 - Optimized **SQL queries** and identified optimal RDS connection thresholds for code refactoring
- **Client-Centric AWS Migration and Security Enhancement**
 - Facilitated in **migrating organization's AWS environment** to client-managed infrastructure
 - Enhanced security by implementing **role-based access control** and encryption layers for ECS services

Research Software Engineer | Hitachi R&D, Tokyo, JPN

Jan'21 – July'23

- **Distributed Data Management Framework for Microservice Architecture**
 - Developed tool for assisting the implementation of **CQRS** and **Event Sourcing** design patterns
 - Reduced development time by 15% using **Domain Driven Design** software development approach
 - Improved scalability and availability of the developed application using **Kafka** and **EventStoreDB** tools

***Patent:** System & method to assist modelling CQRS and ES based application [Submitted]*

TECHNICAL SKILLS

Languages & Frameworks	Python, Dart, SQL, Flask, Django, FastAPI, Golang, Terraform, Bash
Software & Platforms	Github, Tensorflow, Pytorch, Hugging Face, Ollama, LangChain, LlamaIndex crewAI, OpenAI, Docker, Kubernetes, AWS, MLflow, Apache Kafka, Grafana

EDUCATION

Indian Institute of Technology Bombay | Technology and Development

Aug'18 – July'20

- CGPA: 9.3/10 | Machine Learning in Remote Sensing | Advanced Statistics | Satellite Image Processing
- **Publications:** Lonare, A., Maheshwari, B., & Chinnasamy, P. (2022). Village level identification of sugarcane in Sangali, Maharashtra using open source data. Journal of Agrometeorology

Indian Institute of Technology Kanpur | Mechanical Engineering

July'13 – Aug'17

- Major Project: Fabrication of Non Destructive Testing Tool for Machinery Inspection

RELEVANT PROJECTS

- AI-Powered Agentic Autonomous Form Completion System Using Document Intelligence
- Enterprise-Grade Multimodal AI System with Local LLMs for Document, Image, and Voice Processing
- Decision Support System (DSS) for Agriculture Monitoring using Convolutional Neural Network (CNN)
- Real-time onion infection detection using YOLOv3 and sensor data to reduce food spoilage