AMAN LONARE

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PROFESSIONAL EXPERIENCE

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

- **Establishing MLOps Framework to Enhance Model Performance**
  - ▫ Designed & implemented an end-to-end ML system from scratch by following MLOps principles
  - ▫ Reduced integration time for new models from days to hours and increased deployment frequency from bi-annual to monthly by setting up CI/CD pipelines using Amazon Sagemaker tools
  - ▫ Improved monitoring systems using SageMaker Model Monitor, reducing response time by 50%
  - ▫ Reduced model debugging and recovery time by 30% using Model Registry for better management
  - ▫ Reduced training time by 40% using SageMaker Distributed Data Parallelism for distributed training
  - ▫ Improved model accuracy by 23% and reduced user corrections by 25% through continuous retraining
- **Smartphone-Based Transportation Mode Detection**
  - ▫ Collected real-time 16 sensors data from smartphones using Core Motion and SensorManager API
  - ▫ Engineered a deep learning pipeline leveraging LSTM networks and traditional ML frameworks to process multivariate sensor data, achieving 99.3% accuracy in detecting 10 distinct transportation modes
  - ▫ Optimized operational costs by 60% by reducing API calls to OpenStreetMap due to accurate model
- **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 threshold database connection that helped in refactoring code
- **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 for SEs
  - ▫ Reduced development time by 15% using Domain Driven Design software development approach
  - ▫ Improved scalability and availability of the developed application using tools Kafka and EventStoreDB
  - ***Patent:*** *System & method to assist modelling CQRS and Event Sourcing based application [Submitted]*

TECHNICAL SKILLS

Languages & Frameworks	Python, SQL, Flask, Django, FastAPI, Golang, Terraform, Bash
Software & Platforms	Git, Github, Docker, Kubernetes, AWS, MLflow, Tableau, Grafana, Prometheus, Tensorflow, Apache Kafka

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

- 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