

# Aman Lonare

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## PROFESSIONAL EXPERIENCE

### Hitachi R&D, Center for Technology Innovation

Tokyo, JPN

Research Software Engineering, Services Computing Research Dept.

Jan 2021 – Present

- Developing a **Distributed Data Management Framework** for the microservice architecture
- **Developed a tool** for assisting the implementation of CQRS and Event Sourcing design patterns for SEs in **Python**
- Reduced the overall development time by **15%** using Domain Driven Design (DDD) software development approach
- Proposed a plan to integrate the tool in Hitachi's indigenous framework for **microservices application development**

### Indian Institute of Technology Bombay

Mumbai, IND

Project Research Associate

Sept 2020 – Nov 2020

- Developed models for detecting onions infection using **YOLOv3** and **sensors** data with an overall **accuracy of 95%**
- Early detection reduced the **food spoilage by 20%** and increased **farmers revenue by 10%** using **Computer Vision**
- Formulated a curriculum of a nationwide course on “Digital Technology (**Robotics**) for Smart Agriculture” by ICAR

## PROJECTS

### Web-based Decision Support System (DSS) for Crop Monitoring

Aug 2019 – July 2020

- Developed a **web portal** for farmers, govt., and sugarcane mills for **real-time crop monitoring** using remote sensing
- Achieved an **accuracy of 78%** and **F1-score of 0.8** with CNN using open source satellite images at village level
- Reported an increase in the MSP of sugarcane **by 15%** due to improved supply and reduction in food spoilage
- Publication: Lonare, A., Maheshwari, B., Chinnasamy, P. (2020). Village Level Identification of Sugarcane Crop in India using Open Source Satellite Images. Acta Geophysica. *Submitted for publication*

### National Family Health Survey-4 (NFHS) Malnutrition Data Analysis

Jan 2019 – May 2019

- Identified prevalence of Malnutrition in Indian states with inferences from socio-biomedical factors using QGIS
- Performed **Tukey, Fischer, Bonferroni tests** on NFHS-4 data on malnutrition with 25+ features using MINITAB

## SKILLS

**Programming Languages:** Python, Java, SQL, HTML5, CSS3

**Data Science & Technologies:** A/B testing, ETL, Data Science Pipeline, Keras, Tensorflow, PyCharm, Docker, Kubernetes, AWS, Git, Flask, Axon Framework, Spring Boot, Microservices, DevOps

## LEADERSHIP & AWARDS

- **Publication**: Lonare, A., Srivastava, A., Chinnasamy, P. (2019). Study of LULC Change in Academic Campus by Analyzing Rainfall-Runoff Process for Sustainable Design. [Conference Paper].
- **Winner of TECHNO-VISION 2018**, a National Level Technical Paper Presentation organized under TEQIP-III
- Core member of **Data Analytics and Visualization Team** of UG Academic Council, IIT Bombay
- Setup **Rural Data Research & Analysis Lab (RuDRA)** as Teaching Assistant in IIT Bombay (Rs.2 million budget)

## EDUCATION

### Indian Institute of Technology Bombay | Post Graduation

Mumbai, IND

Specialization: Technology and Development

July 2020

- Cumulative CGPA: **9.3/10**
- Machine Learning in Remote Sensing | Advanced Statistics | Satellite Image Processing | Project Management

### Indian Institute of Technology Kanpur | Graduation

Kanpur, IND

Specialization: Mechanical Engineering

July 2017

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