

Data/AI Engineer (Image/Video) – Contract Role/Fixed Term

Data Engineering | Kanpur (ARF HQ) or hybrid

About Airawat Research Foundation

India's cities produce most of the country's wealth and hold most of its future, yet the work of running them has grown more complex than the tools built for it. Over the last two decades, India has done real work to close that gap. We have digitised records, built the rails for identity, payments, and services, and brought governance onto a foundation that reaches people at scale. That groundwork is what makes the next step possible. The technology available today, and the technical depth India now has to use it, let us build on that foundation and carry it into its next age.

We envision an India where every city, whatever its size, can see clearly where it stands and act with confidence from there: from records it can trust, to revenue that funds its own work, to services that hold up day to day, streets that don't flood, air that's breathable, complaints that actually close, to risks caught before they become losses, and finally to cities that plan and compete as the economic engines they already are.

What we want is to help decision makers make better decisions, grounded in data. We draw on the sources already available, and we build new ones where they are missing. On top of that, we help them see the implications of a decision before they act on it. Once a decision is taken, its impact can be measured, so that governance can be recalibrated and improved, city by city, across the country. This is a country that knows its own challenges, knows its own strengths, and builds technology suited precisely to both.

No one organisation can do this alone, and ARF sits at the centre of a network built for it. Anchored in India's public research institutions, with IIT Kanpur at its core and a wider circle of researchers at IIT Delhi, IIT Gandhinagar, Princeton, Carnegie Mellon, and others, we bring deep intellectual capital to the problem. Around that, we work with partners who specialise in implementation, with enterprises and startups bringing emerging technology to the work of making cities governable and sustainable, and with nonprofits who contribute data and the on-the-ground presence that helps cities grow.

Together, we turn research and innovation into what cities can use, and cities' problems into research and innovation worth pursuing. Our role is to make each step of this work more affordable, faster, and more certain. We do it through open frameworks, shared platforms, and measurement cities can trust, so that states, cities, researchers, companies, and civil society can all build on the same foundations, and what works in one city comes within reach of a thousand.

We succeed when cities do better, and when they can measure that they have.

The AI Centre of Excellence for Sustainable Cities

The AI Centre of Excellence (CoE) for Sustainable Cities is the technical and delivery engine inside ARF that turns this vision into working software and infrastructure. It spans Solutions teams embedded in state governments, Product teams building the platform's core modules (Property, Finance, PGR, VMS, Air Quality), Data Engineering teams processing satellite, sensor, and administrative data at city scale, Quality Assurance, a Platform team running the underlying infrastructure, and a Research team pushing the frontier of what's possible. This role sits within that CoE.

Role Overview

Our vision is to help decision-makers see the implications of a decision before they act on it — and for physical risks like encroachment, flooding, and unsafe infrastructure, that means teaching machines to see a city the way an inspector would, at a scale no inspector ever could. As Data/AI Engineer (Image/Video), you build the computer vision, LLM, and agentic AI systems that catch these risks before they become losses, and you keep the team's toolkit current as new AI techniques emerge.

What We're Looking For

- Experience deploying computer vision in impact, GovTech, or urban-monitoring products is a strong plus
- Familiarity with digital twin platforms that use vision models for real-time city monitoring is a plus
- A genuine interest in Indian cities and urban risk, not just the model architecture
- Comfort working with noisy, incomplete, or imbalanced real-world visual data
- Alignment with ARF's mission: helping cities see clearly where they stand, act with confidence, and measure the impact of what they do

Key Responsibilities

- Design, train, and deploy computer vision models for satellite, drone, and video data (e.g., encroachment detection, infrastructure monitoring, traffic and flood analysis)
- Build MLOps pipelines to deploy and monitor models in production across city deployments
- Work closely with the Image and Sensors engineers to build end-to-end vision pipelines
- Collaborate with the Research team to translate research prototypes into production models

Required Qualifications

- BTech/MS in Computer Science, AI, or a related field
- Strong hands-on experience with PyTorch or TensorFlow
- Experience with computer vision: detection, segmentation, video analytics, and transformer-based vision models
- Working knowledge of LLMs and agentic AI systems, and comfort adopting new AI techniques as the field moves
- Experience deploying and monitoring models in production (MLOps)
- 2–5 years' experience

Location

Kanpur (ARF HQ) or hybrid