# IndiaInflation Project Technical & Strategic Overview (v1.0 — October 2025)

## 1. Project Vision

Goal:  
Create India’s most accurate, interactive, and transparent inflation data & analytics platform, bridging official CPI data (MOSPI) and public understanding through live dashboards, calculators, and educational content.  
  
MVP Objective:  
Deliver a working public prototype that includes a functional web app, WordPress CMS, live inflation calculators, indexed search, and stable CI/CD deployment.

## 2. Architecture Overview

The platform combines a Next.js frontend, WordPress CMS backend, and Python ETL data layer on Hetzner Cloud, integrated through Docker and GitHub Actions.

## 3. Tech Stack — with Rationale

Frontend: Next.js 14 + React 19  
Styling/UI: TailwindCSS + shadcn/ui  
Backend CMS: WordPress (Headless)  
DBs: PostgreSQL 16 & MariaDB 11.4  
ETL: Python + MOSPI CPI fetcher  
Search: Typesense  
Storage: MinIO  
CI/CD: GitHub Actions  
Hosting: Hetzner Cloud  
Monitoring: Prometheus + Grafana (upcoming)

## 4. Key Components & Current Status

Frontend, API, WordPress CMS, ETL pipeline, Search index, and MinIO backups are all working in staging. Monitoring, calculators, and UI/UX polish are pending.

## 5. Accomplished Tasks

All major infrastructure and pipelines built, WordPress & DBs configured, Typesense indexed, CI/CD functional via GitHub Actions + SSH deploy to Hetzner.

## 6. Remaining MVP Milestones

Next: Build Inflation Calculators, Charts, SEO, and polish UI/UX before production deployment.

## 7. Repo Structure (Simplified)

indiainflation/  
├── .github/workflows/  
├── web/  
├── etl/  
├── infra/  
├── scripts/  
└── db/

## 8. Development Workflow

Push → CI build → Docker image → SSH deploy → Health check → Nightly MinIO backup.

## 9. Known Issues / Future Enhancements

Add ISR revalidation for WordPress posts, throttle ETL CPU usage, introduce Redis cache, improve SEO.

## 10. Next Actions

1️⃣ Validate staging UI  
2️⃣ Verify WordPress post sync  
3️⃣ Build inflation calculators  
4️⃣ Setup production workflow  
5️⃣ Public Beta Launch 🎉