

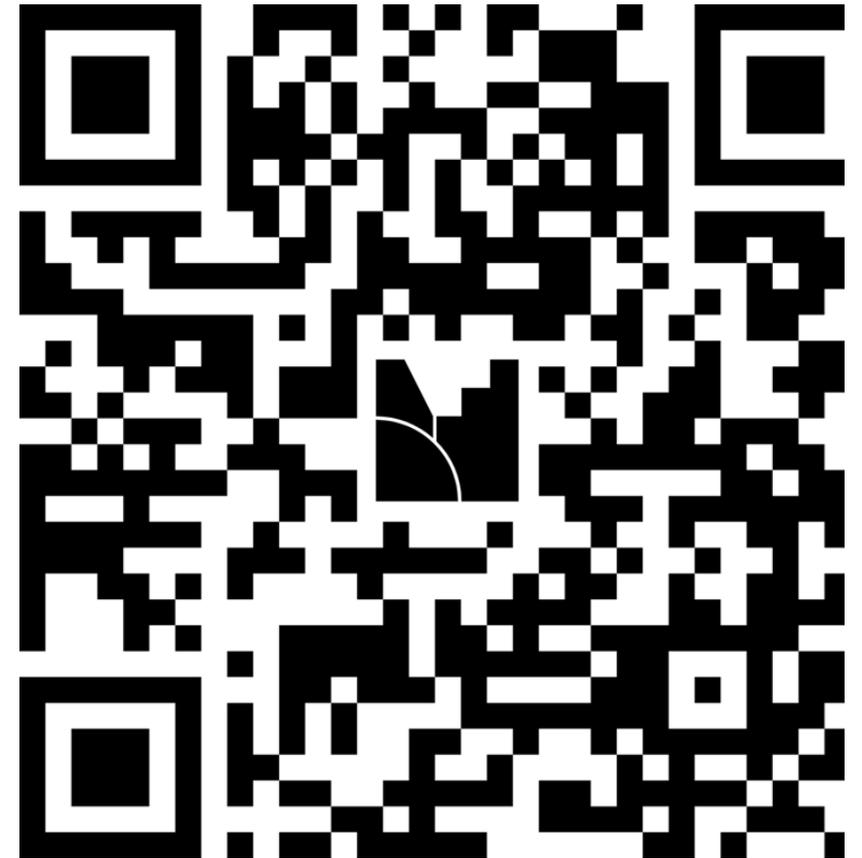
Improving public service delivery using AI tools: Pathways for the future

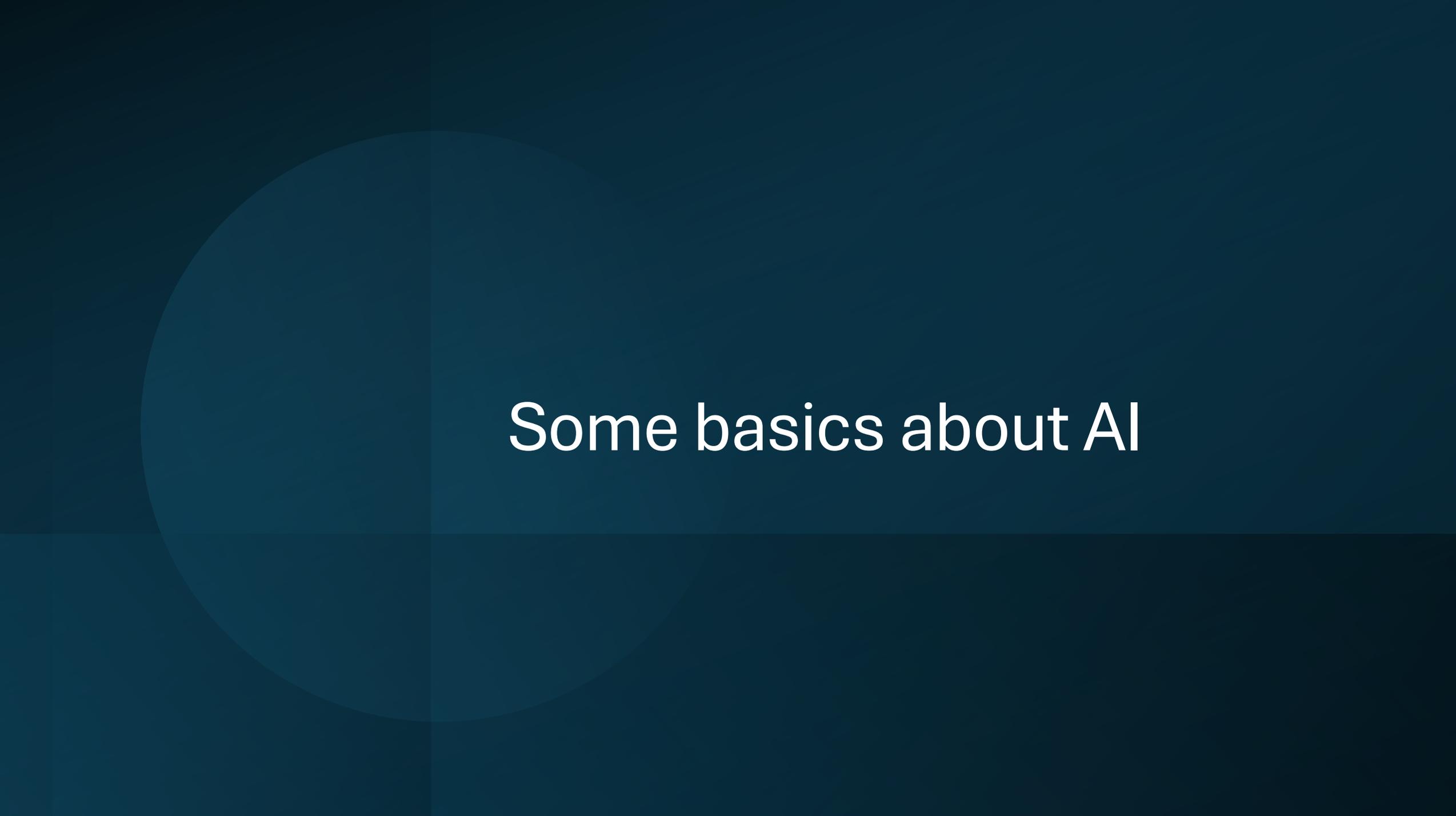
R Subrahmanyam IAS (rtd)

Former Education Secretary, Govt of India

Let us start here....

menti.com
55526243



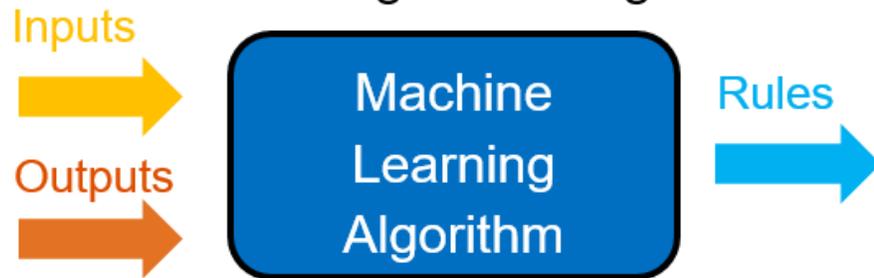


Some basics about AI

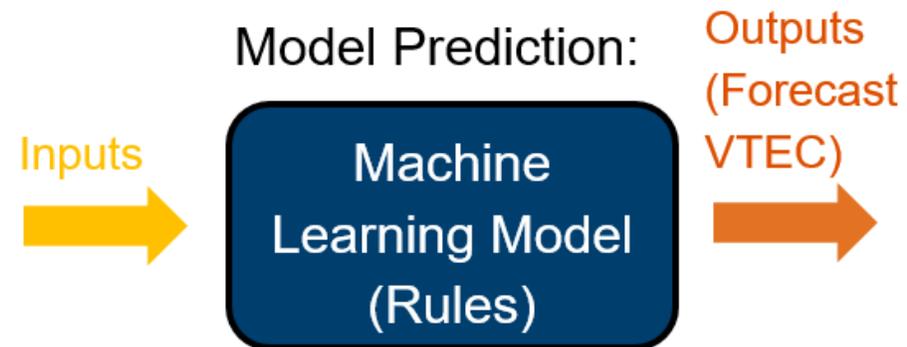
AI Vs traditional computer prog



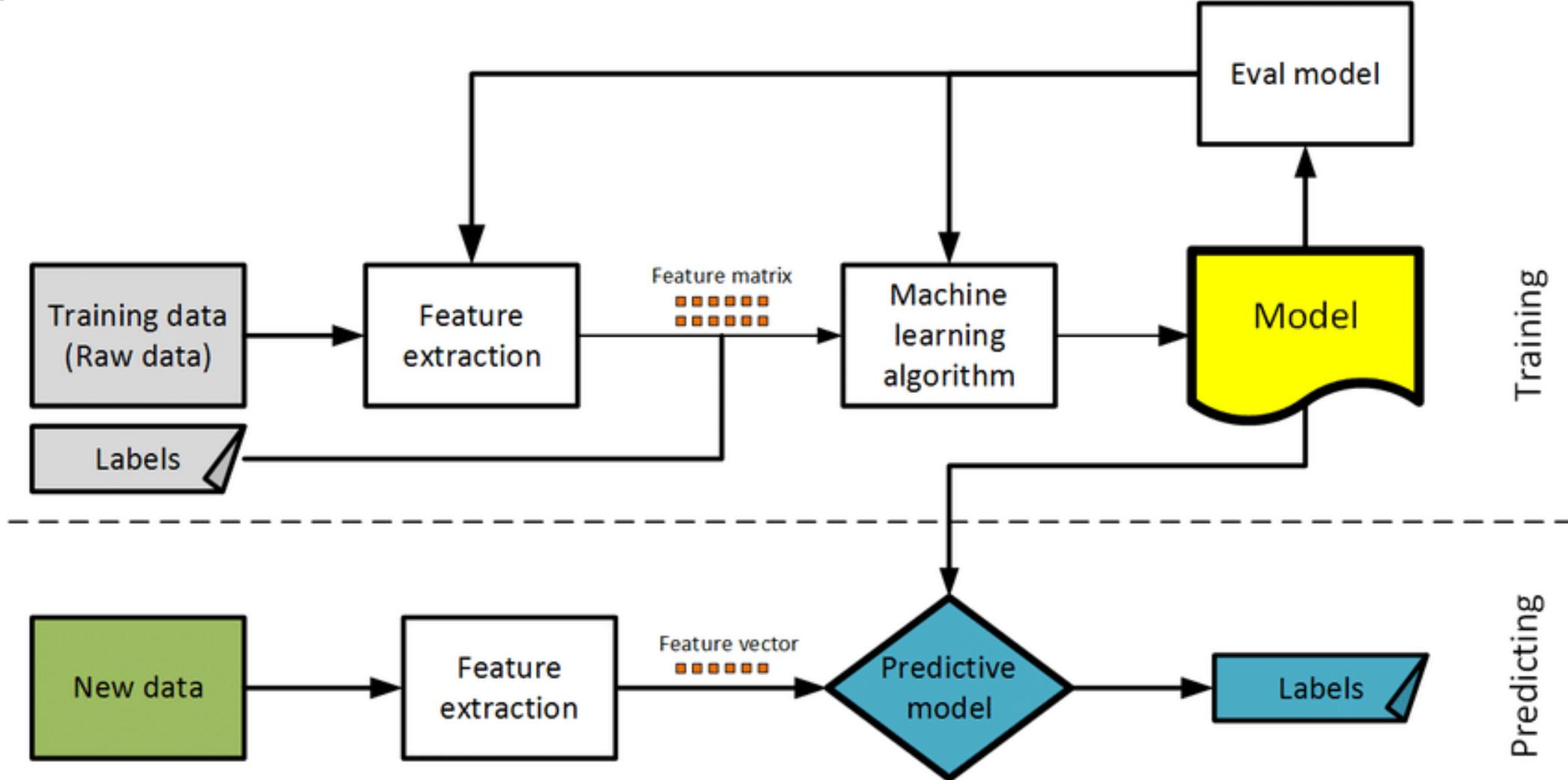
Training / Learning:



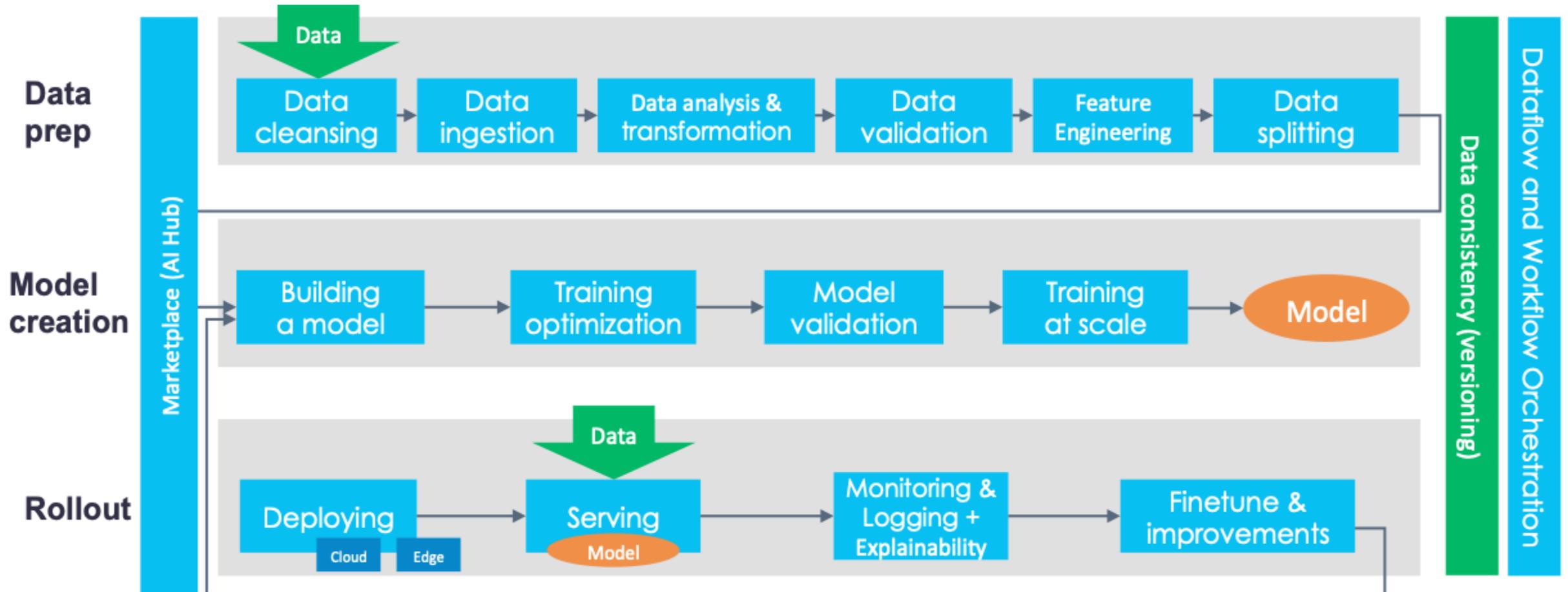
Model Prediction:



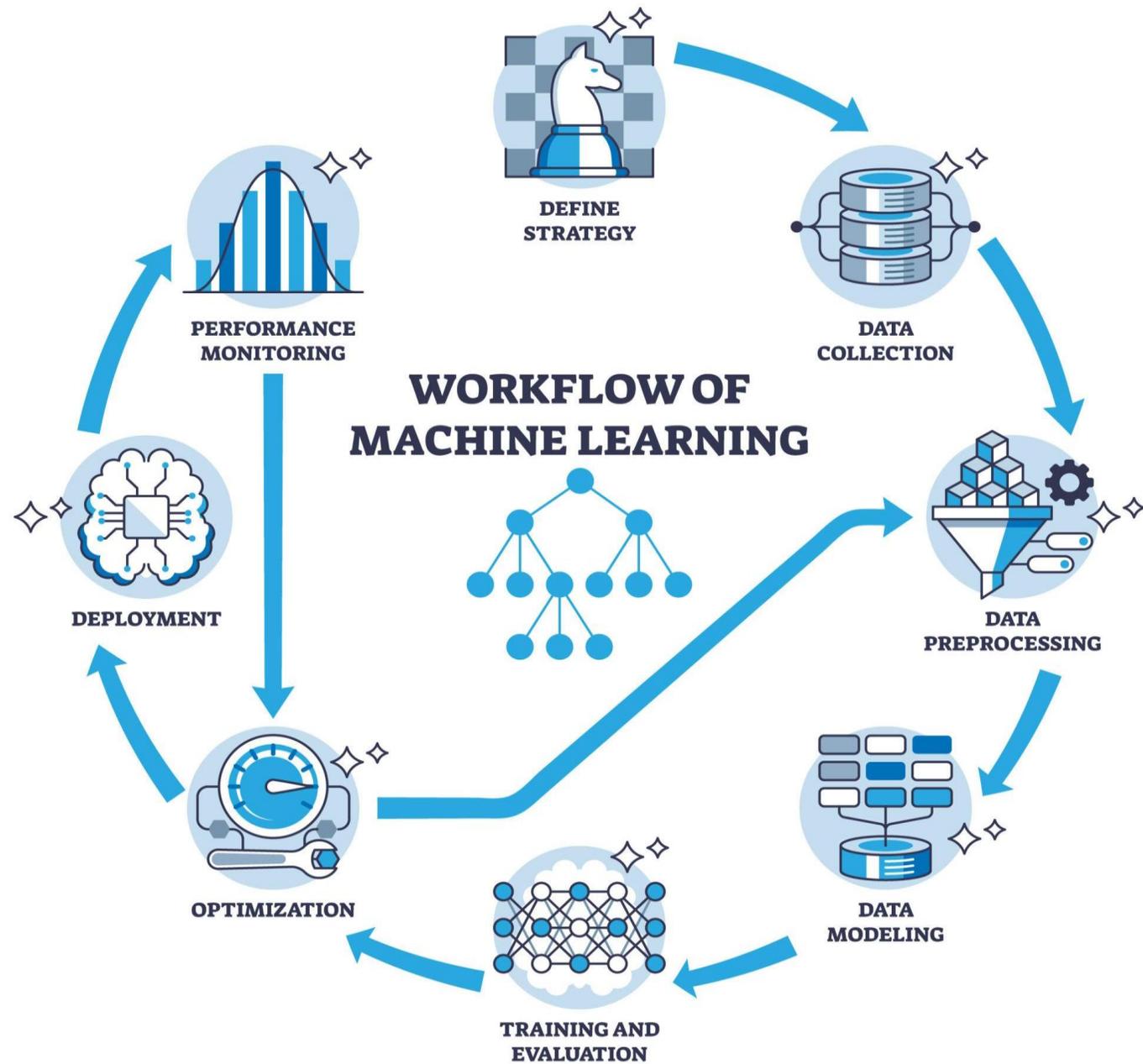
Data + Algorithms + Models



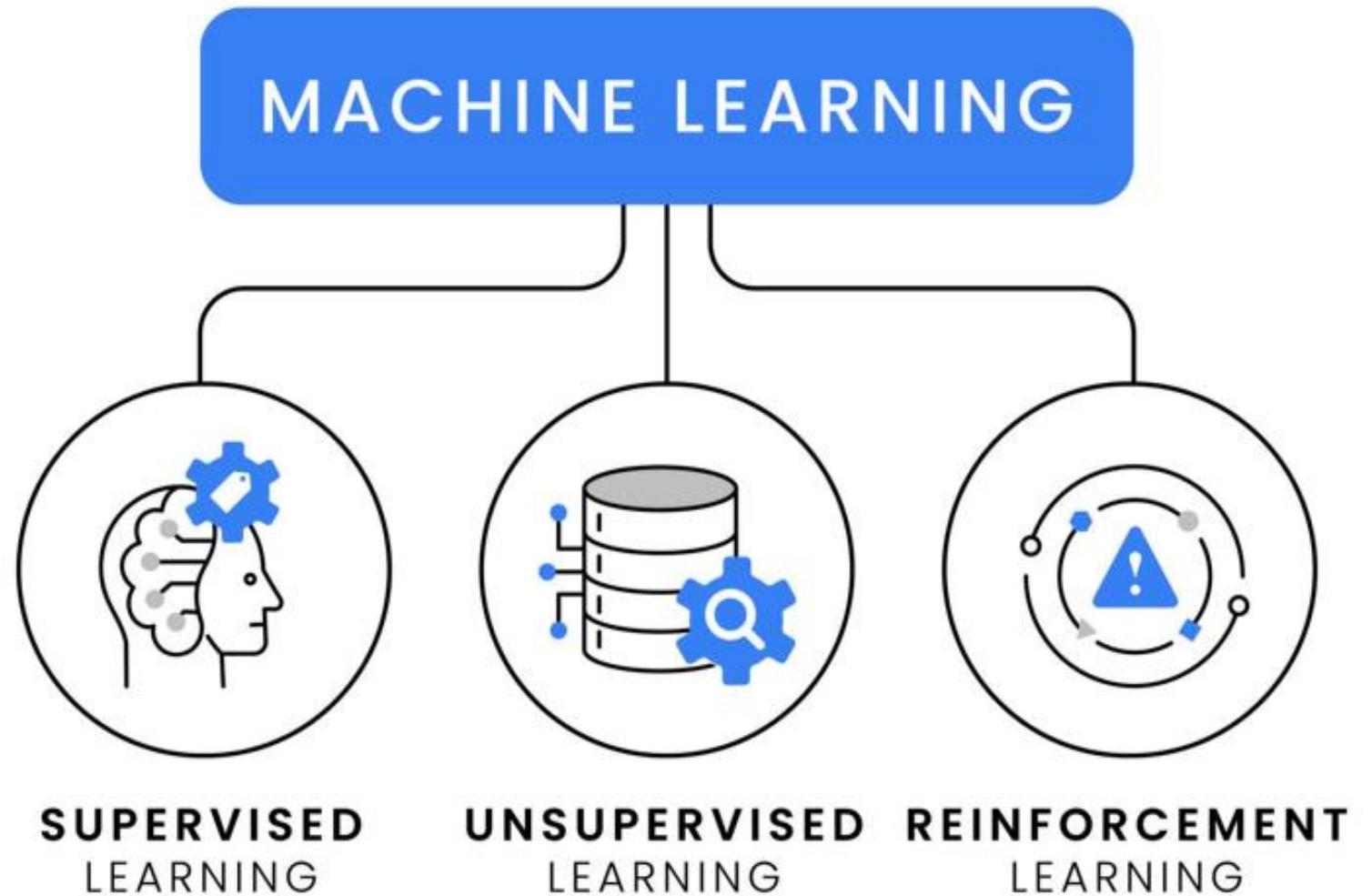
Process from data to AI model

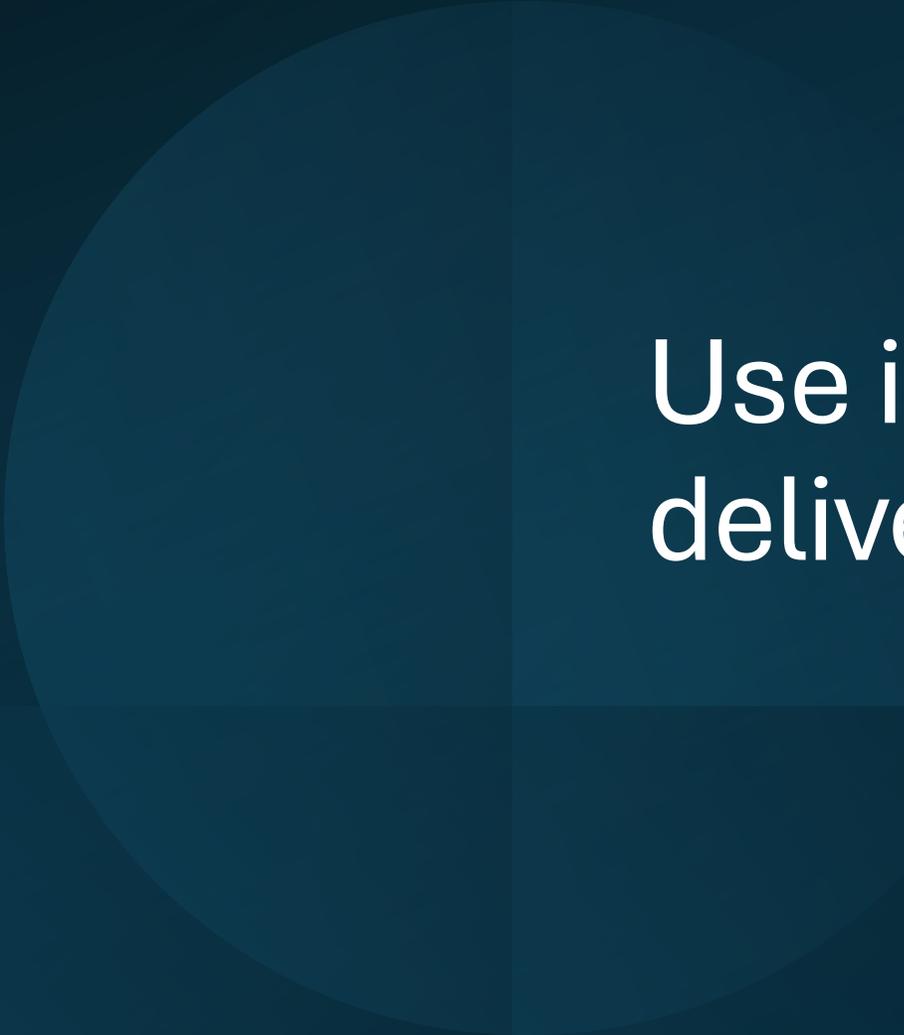


Strategy for AI/ML



Training the machine





Use in public service
delivery

Public service paradox

Govt collects a lot of data - put to little use

People's expectations – ever rising

Digital public goods creating new standards

Efficiency bar set in the private sector

Aadhaar database

Digital banking

E-commerce

How do AI models help?

01

Scale quickly

02

Handle
fragmented data

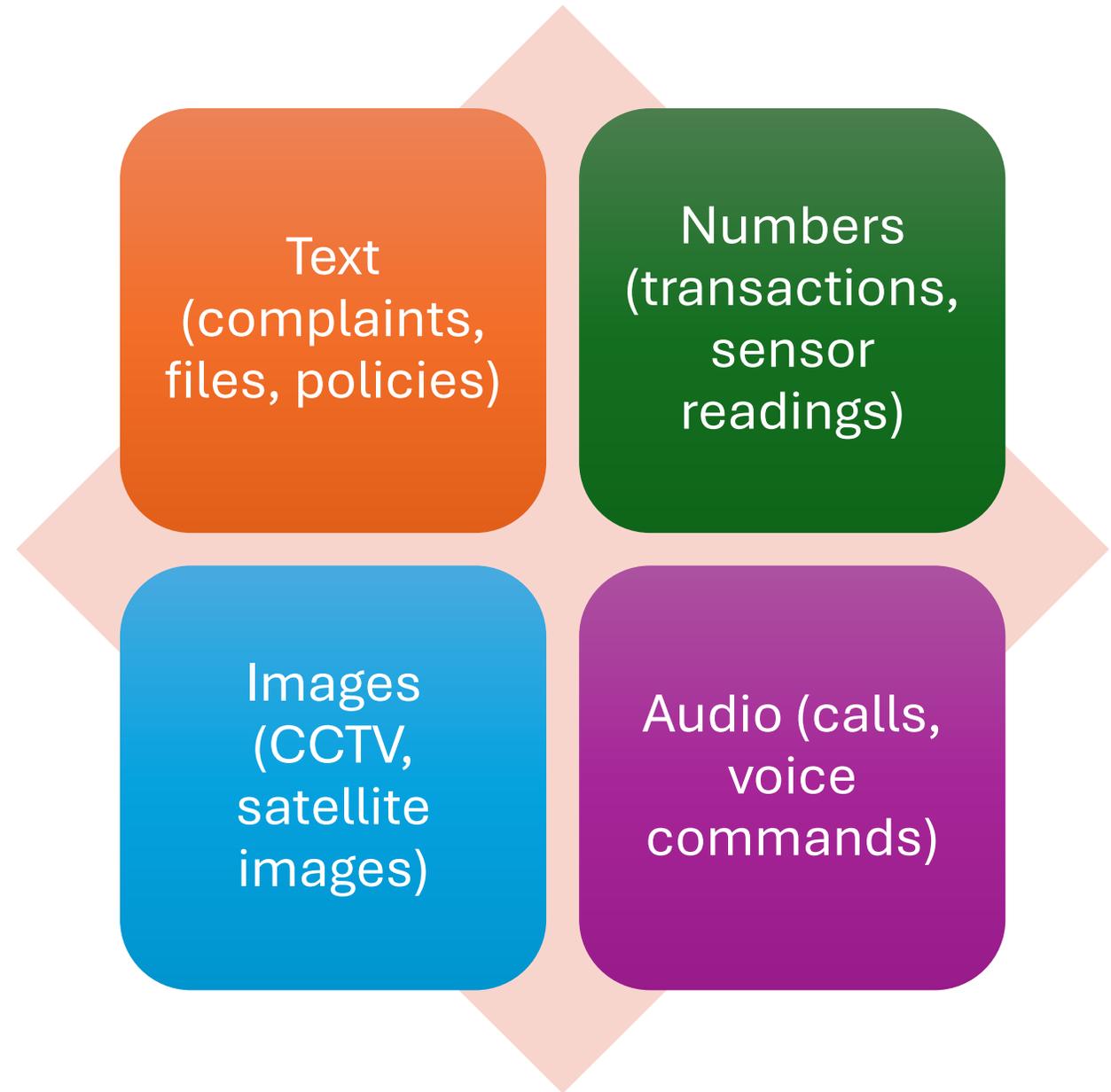
03

Reduce Human
discretion →
delays, leakages,
exclusion

04

Remove
Capacity
constraints at
frontline

Data is the fuel for AI



AI-based systems transform public service deliver

01

From **rule-based automation** →
learning systems

02

From **reactive governance** →
proactive governance

03

From **uniform schemes** →
personalized service delivery

5 ways for the use of AI in public service delivery

1. Predictive analytics

- Risk scoring, early warning systems

2. Natural Language Processing (NLP)

- Chatbots, grievance analysis, document processing

3. Computer vision

- Infrastructure monitoring, compliance verification

4. Recommender systems

- Targeting beneficiaries, nudges

5. Generative AI

- Drafting notices, case summaries, citizen communication

1. Better targeting of welfare schemes

- Data integration – pooling of data
- Deduplication – eliminating duplicate beneficiaries
 - 1.23 Cr duplicate cards eliminated
- Identification of eligible beneficiaries: SECC 2011:
 - Use of database integration
 - Real-time data

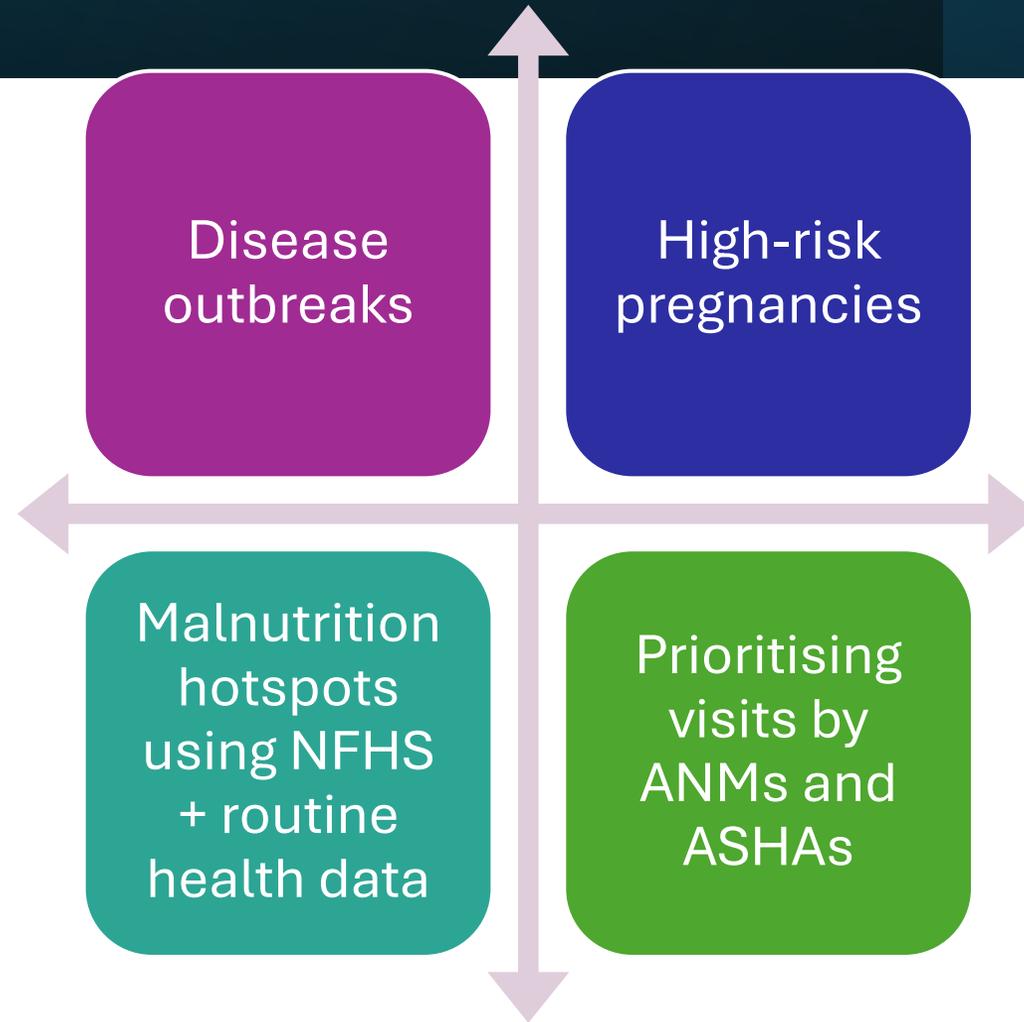
2. Smart grievance redressal systems

NLP-based
clustering of
complaints on
CPGRAMS

Automatic routing to
the correct
ministry/department

Sentiment analysis
to flag urgent or
repeat grievances

3. Health and nutrition systems – predictive models



4. Education

School Education

- AI-driven adaptive learning platforms in government schools
- Early identification of learning gaps (Foundational Literacy & Numeracy)

Higher education

- Student dropout prediction
- Course recommendation
- Faculty workload optimization

5. Urban administration

Computer vision applications

- Pothole detection
- Property tax assessment
- Illegal construction monitoring
- Solid waste tracking
- AI-enabled traffic management in cities like Bengaluru and Delhi

6. Judiciary and Police

Judicial administration

- AI-based case flow management
- Predicting adjournment risk
- Automatic case summarization

Policing

- Crime hotspot prediction (with safeguards)
- Resource deployment optimization

Success factors for AI Models

Data readiness

- Interoperable, clean, real-time datasets

Clear problem framing

- AI solving a *service bottleneck*, not a tech showcase

Human-in-the-loop

- Final decisions remain with officials

Institutional ownership

- Not vendor-driven pilots

Legal & ethical guardrails

- Transparency, auditability, grievance appeal

Watch out for these....

Operational risks

- Poor data → poor AI decisions
- Black-box algorithms
- Over-automation of discretion

Equity risks

- Digital exclusion
- Algorithmic bias against:
 - Women
 - Minorities
 - Informal workers

Governance risks

- Vendor lock-in
- Weak accountability
- Taking AI as dictum

Way forward for Telangana

From Pilots to Platforms

- Shift from isolated pilots to **national/state AI platforms**
- Common data layers + reusable models

B. Domain-Specific AI Playbooks

- Health AI
- Education AI
- Urban AI
- Welfare AI
(each with clear dos & don'ts)

C. Capacity Building of Officials

- AI literacy for IAS/State Civil Services
- Role-based training: Policy designers/District collectors/Frontline supervisors

Way forward for Telangana

Ethical & Regulatory Frameworks

- Algorithm audits
- Explainability standards
- Right to human review
- Public disclosure of AI use in decisions

Public–Academic–Startup Collaboration

- Sandboxes with universities & social enterprises
- Outcome-linked procurement instead of software purchases