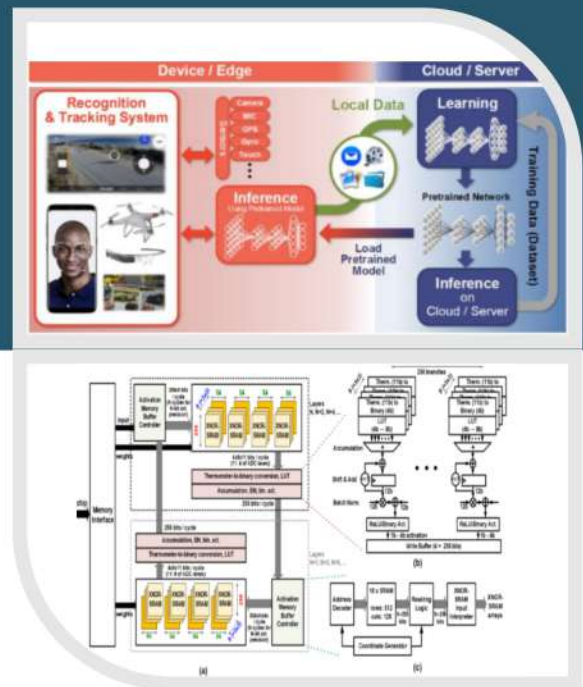


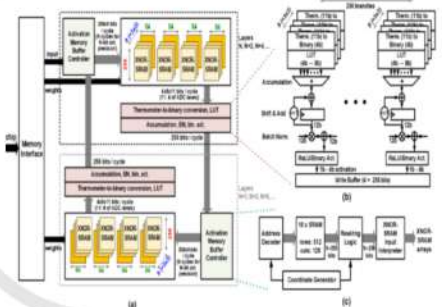
## TECHNOLOGY DEVELOPMENT PROGRAM

### Smart City and Societies



## AI Accelerator

Computing in memory-based DNN accelerator for edge AI application



### Issue Being Addressed

- ▶ Never-ending demand for better and faster computing performance
- ▶ Efficient, fast, reliable solution for data-intensive applications

### Key Feature of The Technology/Product /App Which Is Being Developed

- ▶ In-memory computing to overcome Von-Neumann bottleneck
- ▶ Improved latency and throughput
- ▶ Image classification for edge AI

### CPS Relevance

- ▶ Novel memory cell that can perform in-memory computation effectively for data-intensive applications

### Impact & Benefits

- ▶ Help to reduce the carbon footprint for high computing applications
- ▶ In the technology surrounded world, implementing AI at edge devices will help us to develop smart cities
- ▶ The proposed solution will reduce the carbon footprint and computing infrastructure requirement

### Team

- ▶ Narendra Singh Dhakad  
PhD Scholar
- ▶ PI: Dr Santosh Kumar Vishvakarma  
Professor
- ▶ Indian Institute of Technology Indore
- ▶ CHANAKYA Ph.D. Fellowship

### Targeted Customers & End Users

- ▶ Datacentres
- ▶ High Performance Processor

### Commercialization Status

- ▶ Prototype developed, applied for the patent, and has collaborated with RackBank Datacenters Pvt Ltd Indore