SmartEdge
Semantic Low-code Programming Tools for Edge Intelligence

SmartEdge Solution

- Semantic-driven X-Ops for Cloud-Edge Continuum
- Dynamic Swarm Networking
  - A. Automatic discovery and dynamic network swarm formation in near real time
  - B. Embedded network security
  - C. Hardware-accelerated in-network operations for context-aware networking
  - D. Dynamic swarm networking in SmartEdge application areas

Low-code Programming Tools for Edge Intelligence

- Edge Intelligence
  - Device-Edge-Cloud Continuum
  - Multimodal Fusion (A)
  - Edge-Cloud Elasticity (B)
  - Compiler (A,x)
  - Optimizer (C)
  - Interpreter (B,x)
  - Coordinator (C)
  - Data Ops (WP3)
  - Network Ops (WP4)

SMARTEDGE DataOps
- Application simulations (X)
- Business requirements (X)
- Deployment and scalability automation (X)
- Application i/Devices/Networking (X)
- Application configuration (X)

SMARTEDGE Swarm Application
- Standardized Semantic Interfaces
- Semantic Sift Description (X)
- API (P)
- Network (X)
- Data (P)
- DataOps (P)
- Semantic-driven AI apps (X)
- Semantic-driven edge intelligence (X)
- Continuous Semantic Integration (X)

Smart factory with low-code edge intelligence

SmartEdge Use Cases

- Smart factories with intelligent mobile robots
- Cooperative perception for driving assist

Active automotive option-zone management

Edge/Swarm intelligence in health

- Smart factories with intelligent mobile robots
- Cooperative perception for driving assist

- Embedded security and isolation (X)
- Network traffic classification and change detection using on-board intelligence
- High throughput, low latency, & energy efficient stream processing
- Intelligent exchange of provenance among adjacent nodes
- Finshed datasets metadata
- In-network communication channel

Low-code Programming Tools for Edge Intelligence