

Step 5 Continuous Improvement



Strategies and behaviors sharing



User Feedback

Update Parameters



Step 1 System Evaluation

I have a data acquisition demand. The data about me and what I have observed is as follows: XXXXXX

- Bandwidth availability
- Signal strength variations
- Network load fluctuations
- User mobility patterns
- xxx



Mobile Edge Networks

Step 4 Optimization Problem Solving

$$\min F = \{f_1, f_2, \dots, f_m\}$$

Decomposition

$$\min F_1 \quad \min F_2 \quad \dots \quad \min F_n$$

Assign



Interaction

Merge



Check errors

Output

- Hierarchical □ Peer-to-Peer
- Centralized ■ Message Shared

Selection of paradigm

- Cooperation □ Competition
- debate

Selection of Structure

- Message Passing

- Direction Communication
- Over-the-air Combining

Selection of Strategy

Step 2 Data Integration, Analysis, and Normalization



Message Queue User-submitted Data

Analyze and Extract

Sentiment Analysis

Key Data

Key Data

Aggregate, Polish, and Normalized

Structured Data

Step 3 Metrics Verification and Problem Formulation

$$\min_X F = \{f_1, f_2, \dots, f_m\}$$

$$X = (x_1, x_2, \dots, x_n)^T$$

$$s. t. \begin{cases} g_i(X) \geq 0 \\ (i = 1, 2, \dots, p) \\ h_i(X) = 0 \\ (i = 1, 2, \dots, q) \end{cases}$$

Optimization Problem

