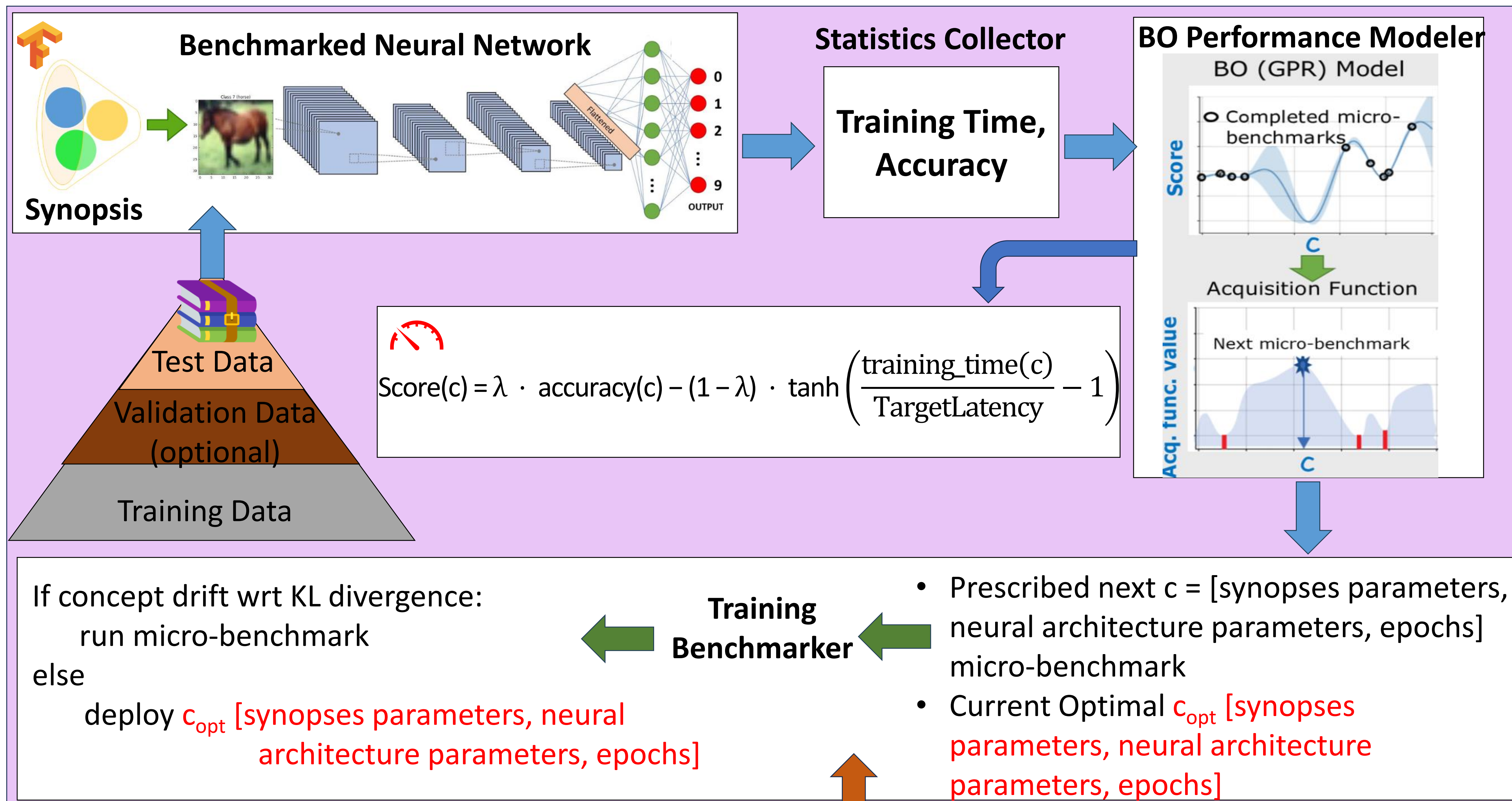




# SuBiTO: Synopsis-based Training Optimization for Continuous Real-Time Neural Learning over Big Streaming Data

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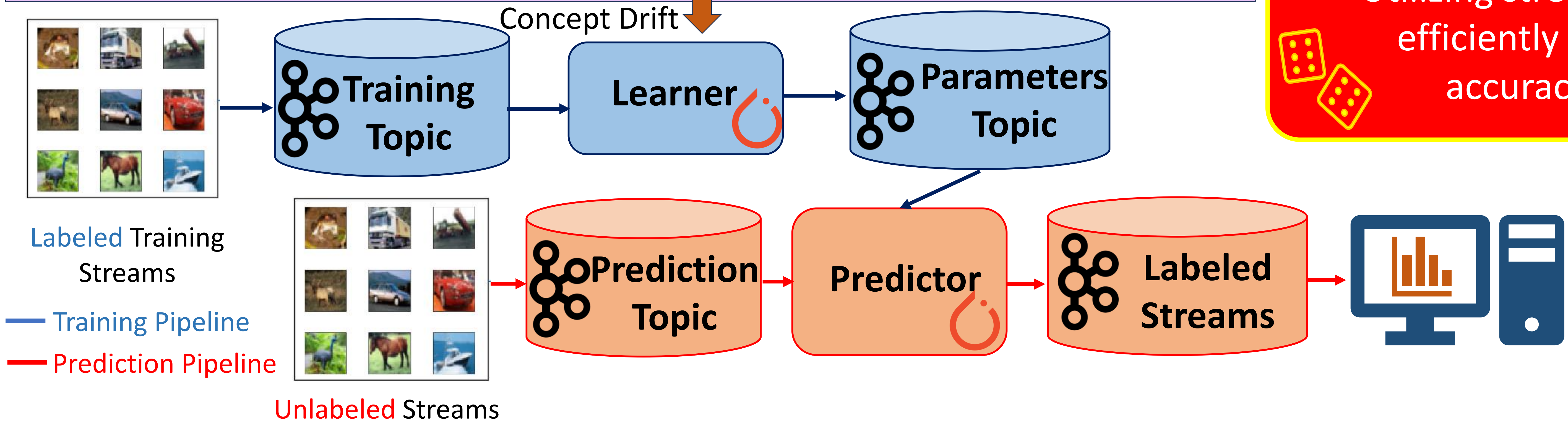


$$\text{Score}(c) = \lambda \cdot \text{accuracy}(c) - (1 - \lambda) \cdot \tanh\left(\frac{\text{training\_time}(c)}{\text{TargetLatency}} - 1\right)$$

## SuBiTO approach

- ✓ ML & Big streaming Data
- ✓ Learns the accuracy vs training speed tradeoff
- ✓ Employs Bayesian Optimization
- ✓ Huge acceleration of training
- ✓ Small accuracy penalty
- ✓ Continuously updated models upon concept drift
- ✓ Image and Video moderation scenarios

Utilizing stream synopsis can help users efficiently control training speed vs accuracy tradeoff in ML tasks



Interested?