TTGO: Tensor Train for Global Optimization Problems

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Tensor Train (TT) represents function as sum-of-product of univariate functions

TTGO: Tool to Optimize functions in TT format

\[ a^* = \arg \max_a Q(s, a) = \arg \max_a Q_{TT}(\hat{s}, a) \]

- Global Optima
- Parallel Implementation
- Multiple Solutions

TTGO for Robotics

\[ Q(s, a) \]

\[ Q_{TT}(s, a) \]

\[ a^* = \arg \max_a Q_{TT}(s, a) \]
Future Work: TTGO for Policy Learning

Dynamic Programming Using TT
(under Review at ICLR-2024)

Neural TT for Policy Learning
(Ongoing Work)

More info: https://sites.google.com/view/ttgo/home