Artificial Intelligence

Efficient Neural Architecture Search for Real-Time Segmentation

Neural architecture search (NAS) is crucial for automating the design of deep neural networks. The paper "MoSegNAS: Surrogate-assisted Multi-objective Neural Architecture Search for Real-time Semantic Segmentation" proposes a surrogate-assisted multi-objective method to address challenges in applying NAS to real-time semantic segmentation tasks. It transforms the NAS task into a multi-objective optimization problem and achieves efficient architectures balancing segmentation accuracy and real-time inference speed.

The proposed method outperforms existing state-of-the-art architectures, both manually designed and automatically generated by other NAS methods, as confirmed through empirical evaluations on benchmark datasets. Notably, this approach is particularly effective in selecting candidate solutions for high-fidelity evaluation compared to conventional pre-screening methods...

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