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(57) Abstract :
An adaptive meta-learning system for rapid model generalization comprises a task intake interface (101), a support-set encoder (102), a task signature generator (103), a meta-parameter controller (104), a parameter modulation engine (105), a generalized prediction backbone (106), an uncertainty assessor (107), an adaptation policy selector (108), and an output validator (109). Support information is transformed into a task signature that governs selective backbone adaptation. Reliability-aware policy control manages refinement or fallback behavior, enabling fast and controlled generalization across heterogeneous unseen tasks under constrained computational conditions.

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