

Core Capability Comparison

Capability	LLVM / GCC	MLGO / CompilerGym	Formal Compilers	MAESTRO
Performance	★★★★★	★★★★★	★	★★★
Correctness enforcement	✗	✗	★★★★★	★★★★
UB awareness	✗ (exploits)	✗	★★★★★	★★★★
Security preservation	✗	✗	★★★★	★★★★
Explainability	✗	✗	★★	★★★★★
Learning/adaptation	✗	★★★★	✗	★★★★
Self-refinement	✗	✗	✗	★★★★
Multi-agent design	✗	✗	✗	★★★★★
IR-level integration	★★★★★	★★★★★	★★	★★★★