

Another novelty lies in the **dynamic orchestration mechanism** that ensures resilience and fallback. If an LLM fails or produces suboptimal output for a given subtask, the system automatically re-routes the request to an alternative LLM, or re-prompts with enhanced context. This level of fault-tolerant design, driven by runtime feedback and testing outcomes, is rarely found in existing LLM pipelines.

Overall, the project reimagines the software generation pipeline by integrating **task abstraction, specialization, orchestration, and validation** into a cohesive system. It not only pushes the boundaries of what LLMs can achieve collaboratively, but also introduces a practical, extensible framework that aligns with the evolving demands of industry-scale software development.