

# PROJECT PLANNING PHASE

## PROPOSED SOLUTION

Team ID	NM2025TMID04990
Project Name	Streamlining Ticket Assignment for efficient support operations

The proposed solution for streamlining ticket assignment is centered on implementing a **Hybrid Intelligent Routing System** that ensures tickets are directed to the right agent, with the right skills, at the right time. This system combines three core mechanisms. First, **Automated Skill-Based Routing** uses a detailed agent matrix, tagging agents with expertise levels across products, languages, and issue types. When a new ticket arrives, an initial triage system—powered by **Machine Learning (ML)**—automatically analyzes the ticket content, priority, and topic to assign the appropriate skill tags. Second, **Dynamic Load Balancing** prevents agent burnout and cherry-picking by factoring in an agent's current queue size, recent assignment history, and scheduled availability before finalizing the assignment. This dynamic approach overrides simple round-robin methods to ensure fair and immediate distribution. Finally, a new **Triage Queue/Role** is introduced, staffed by experienced agents who handle the small percentage of tickets the automation cannot confidently route, acting as a crucial safety net and a continuous feedback loop for refining the ML model. Together, these elements are designed to significantly reduce the ticket assignment rate, cut down Mean Time to Resolution (MTTR), and boost overall team efficiency and morale.

