

Ideation phase

Define the problem statements

Customer Problem Statement Template:

At ABC Corporation, support tickets are currently assigned manually or through a simple round-robin system, often leading to misrouted tickets, uneven workload distribution, and delayed issue resolution. This results in decreased operational efficiency, longer response times, and reduced customer satisfaction.

Support teams and administrators face difficulty identifying the right department or personnel for each issue, especially when ticket volume is high. The absence of an intelligent ticket-routing mechanism causes bottlenecks, repetitive work, and frustration among support agents.

The company needs an automated, intelligent routing system that uses machine learning models (TensorFlow) to analyze ticket content, urgency, and category, and then automatically assign it to the appropriate team through the ServiceNow platform integrated with Spring Framework for backend automation. This will ensure faster response times, reduce manual dependency, and improve customer satisfaction.

Problem & Solution

Problem Description Solution

Inefficient Ticket Routing :

Manual assignment leads to misrouted or delayed tickets. Implement an ML-based ticket classification model using TensorFlow for intelligent routing

Workload Imbalance :

Some teams receive excess tickets while others remain idle. Automate distribution based on agent availability and skill set using ServiceNow APIs.

Delay in Resolution :

Human errors and routing delays increase resolution time. Use a predictive model to auto-assign high-priority tickets to expert teams.

Lack of Transparency:

Users can't track how tickets are routed. Integrate clear routing logs and dashboards in ServiceNow for visibility.

Low Customer Satisfaction:

Delayed support impacts user trust and satisfaction. Enable faster resolution through accurate automated routing.

Example:

Problem Statement (PS) I am (Customer) I'm trying to But Because Which makes me feel

PS-1 A Support Agent Quickly route incoming tickets I have to manually assign them The system doesn't identify the correct team automatically Overloaded and frustrated
PS-2 A Team Manager Balance workload among my team Tickets are unevenly distributed There's no intelligent routing or automation Stressed and inefficient

✓ Problem Statement PS 1:

As a support agent, I am trying to route incoming tickets quickly and accurately, but the current manual process requires me to read, analyze, and assign each one individually.

This slows down response time and causes human errors, leading to delayed resolutions and customer dissatisfaction.

An automated ticket classification model using TensorFlow integrated with ServiceNow would streamline routing and help agents focus on solving issues rather than sorting them.

✓ Problem Statement PS 2:

As a team manager, I want to ensure the workload among my team members is balanced and efficient. However, since ticket assignments are random or manual, some agents are overloaded while others are underutilized.

This affects productivity, team morale, and service quality. A smart routing system that considers agent expertise, ticket priority, and workload would improve fairness, performance, and operational efficiency.

