Project Planning Phase Report

Project Title:

Streamlining Ticket Assignment for Efficient Support Operations

Category:

ServiceNow System Administrator

Skills Required:

- TensorFlow
- ServiceNow
- Python
- REST API
- Data Analysis

1. Introduction

Effective project planning is crucial to ensure timely, cost-effective, and high-quality delivery of software solutions.
This phase outlines the **schedule, resources, milestones, and risk management strategies** for the project *"Streamlining Ticket Assignment for Efficient Support Operations"*, which aims to automate the ticket allocation process in **ServiceNow** using **AI and machine learning (TensorFlow)**.

The project planning phase defines the **scope, timelines, resource allocation, and execution strategy** to ensure smooth development and deployment.

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2. Objectives of Project Planning

- Define the detailed plan for project execution.
- Identify project tasks, resources, and responsibilities.
- Establish project milestones and deliverables.
- Create a schedule with time estimates for each activity.
- Identify potential risks and define mitigation plans.
- Ensure all project phases are aligned with objectives and requirements.

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3. Project Scope

The project focuses on developing and integrating an **AI-based ticket assignment system** in ServiceNow that automates ticket routing to the right support agents.
It includes:

- Designing and training a TensorFlow model.
- Integration with ServiceNow using REST APIs.
- Dashboard creation for monitoring performance.
- Testing and deployment in a ServiceNow instance.

Excluded from the current scope:

- Full-scale production deployment across multiple organizations.
- Integration with other ITSM tools outside ServiceNow.

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4. Project Deliverables

Sl. No.	Deliverable	Description
1	Requirement Specification Document	Detailed functional and non-functional requirements.
2	System Design Document	Architecture and workflow diagrams.
3	Machine Learning Model	Trained TensorFlow model for ticket assignment.
4	API Integration Scripts	REST API setup for communication between ServiceNow and TensorFlow.
5	Testing Reports	Unit, Integration, and Performance test results.
6	Final Project Report	Complete documentation of development and implementation.

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5. Work Breakdown Structure (WBS)

Phase	Tasks	Duration
1. Requirement Analysis	Collect and analyze requirements	1 Week
2. System Design	Define architecture and data flow	1 Week
3. Model Development	Train TensorFlow model on ServiceNow data	2 Weeks
4. Integration	Connect TensorFlow model with ServiceNow using REST API	2 Weeks
5. Testing	Perform functional and performance testing	1 Week
6. Deployment	Deploy model in ServiceNow sandbox	1 Week
7. Documentation	Prepare reports and user manuals	1 Week

Total Estimated Duration: 9 Weeks

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6. Gantt Chart (Project Schedule)

Phase	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
Requirement Analysis	■■■								
System Design		■■■							

Phase	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
Model Development			■■■	■■■					
Integration				■■■	■■■				
Testing						■■■			
Deployment							■■■		
Documentation								■■■	■■■

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7. Resource Planning

Human Resources:

Role	Responsibilities
Project Manager	Plan, monitor, and manage project progress.
ServiceNow Administrator	Configure and integrate ServiceNow workflows.
Machine Learning Engineer	Develop and train TensorFlow model.
Backend Developer	Implement REST APIs and data handling.
QA Engineer	Conduct testing and validation.

Hardware Resources:

- Laptop/Workstation with 8 GB RAM, Intel i5 Processor or higher
- Stable Internet Connection

Software Resources:

- ServiceNow Developer Instance
- Python 3.x with TensorFlow
- Postman (for API Testing)
- Jupyter Notebook
- Visual Studio Code

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8. Risk Analysis and Mitigation Plan

Risk ID	Risk Description	Impact	Likelihood	Mitigation Plan
R1	Insufficient ticket data for model training	High	Medium	Use synthetic or anonymized datasets to supplement data.
R2	Integration errors between TensorFlow and ServiceNow	High	Medium	Test API endpoints early and use mock data.
R3	Model accuracy below expectations	Medium	High	Apply data preprocessing, feature selection, and re-training.
R4	ServiceNow access or API limitation	High	Low	Use ServiceNow Developer Instance and verify permissions.
R5	Time overruns in model tuning	Medium	Medium	Allocate buffer time and parallelize model training tasks.

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9. Cost Estimation

Item	Cost (INR)
Developer Tools (Software Licenses)	10,000
Cloud/Server Resources	8,000
Miscellaneous & Documentation	2,000
Total Estimated Cost	**20,000 INR**

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10. Communication Plan

Activity	Frequency	Mode of Communication
Team Meetings	Weekly	Google Meet / Microsoft Teams
Progress Reports	Bi-weekly	Email / ServiceNow Dashboard
Client Review	Monthly	Presentation
Documentation Updates	Continuous	Shared Repository

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11. Quality Assurance Plan

- **Code Review:** Weekly peer reviews.
- **Testing:** Unit and integration tests for all modules.
- **Performance Metrics:** Model accuracy, API latency, and assignment success rate.
- **Documentation:** Maintain up-to-date project and technical documentation.

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12. Milestones and Deliverables

Milestone	Description	Due Date
M1	Completion of Requirement Analysis	Week 1
M2	System Design Approved	Week 2
M3	Model Training Completed	Week 4
M4	Integration with ServiceNow	Week 6
M5	Testing Completed	Week 7
M6	Deployment and Final Documentation	Week 9

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13. Expected Outcomes

- Intelligent ticket assignment system integrated into ServiceNow.
- Automated and accurate distribution of tickets among support agents.
- Reduced resolution time and improved customer satisfaction.
- Insightful performance metrics through dashboard visualization.

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14. Conclusion

The **Project Planning Phase** provides a clear roadmap for executing the *Streamlining Ticket Assignment for Efficient Support Operations* project.
With well-defined tasks, resource allocation, risk management, and quality assurance measures, this plan ensures systematic and efficient implementation leading to successful project completion.