# 📘 Automated IT Service Ticket Classifier – Client Documentation

## 1. Introduction

Managing IT service tickets manually is time-consuming and prone to human error. Our Automated Ticket Classifier uses Artificial Intelligence (AI) to instantly categorize incoming IT support requests, helping your team resolve issues faster and with greater accuracy.

## 2. Key Benefits for Your Business

✅ Faster Ticket Resolution – Tickets are automatically routed to the right team.

✅ Reduced Manual Effort – Less time spent on sorting and categorizing requests.

✅ Improved Accuracy – AI model trained on your past tickets for reliable predictions.

✅ Scalable Solution – Works on thousands of tickets daily without performance drop.

✅ Better Customer Satisfaction – Quicker resolutions mean happier employees/customers.

## 3. How It Works (Simple Workflow)

1. User Submits Ticket → An employee raises a service request (e.g., 'Laptop not connecting to Wi-Fi').
2. System Processes Ticket → The AI cleans and understands the text.
3. AI Classifies the Ticket → System predicts the most likely issue type (e.g., 'Network Issue').
4. Output → Predicted category + confidence score shown instantly.
5. Routing → Ticket can be forwarded automatically to the correct IT support team.

## 4. Example Predictions

- Input: "Laptop battery not charging properly" → Prediction: Hardware Issue (Confidence: 92%)

- Input: "Unable to access email server" → Prediction: Network Issue (Confidence: 87%)

- Input: "Need installation of Microsoft Office" → Prediction: Software Request (Confidence: 90%)

## 5. Features in the Client Application

🎫 Simple Interface – Just type/paste ticket details.

⚡ One-Click Prediction – Instantly see the ticket category.

📊 Confidence Score – Shows how sure the system is about the prediction.

🌐 Web-Based – Runs on Streamlit, accessible via browser, no extra setup needed.

## 6. Deployment & Usage

* Open the application in your browser.
* Paste or type the ticket description.
* Click 'Predict'.
* View the predicted category and confidence level.

## 7. Future Enhancements

🔍 Multi-label Classification → Some tickets may belong to more than one category.

🛠 Integration with Ticketing Tools (ServiceNow, JIRA, etc.) for automated routing.

📈 Analytics Dashboard → Monitor ticket trends and support team performance.

🌍 Multilingual Support → Classify tickets in multiple languages.

## ⚡ Summary

This AI-powered solution reduces ticket triage time, improves IT support efficiency, and ensures your employees get faster help with their technical issues.