

Manual Title: EchoDesk – AI Agent Help Desk User Guide

Version: 1.0

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1. Product Overview

EchoDesk is an AI-powered Help Desk system designed to automate customer support using intelligent agents. It combines a FastAPI backend with a FlutterFlow front end, allowing businesses to deploy responsive, scalable AI agents capable of solving customer queries in real-time.

2. System Architecture

2.1 Backend:

- Language: Python
- Framework: FastAPI
- Purpose: Serve AI endpoints, handle API logic, integrate with databases
- Security: JWT Authentication, CORS enabled

2.2 Frontend:

- Platform: FlutterFlow
- Features: Custom UI components, API integration, multi-platform deployment (iOS, Android, Web)

2.3 Database:

- Vector DB (e.g., Qdrant, Pinecone, Weaviate) used for semantic retrieval
 - Relational DB (e.g., PostgreSQL) used for user data and ticket history
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3. Features

3.1 AI Agent:

- Trained on your company's documentation
- Retrieval-Augmented Generation (RAG) enabled

- Multilingual support

3.2 Ticketing System:

- Auto-tagging of issues
- Escalation routing
- Manual override

3.3 Admin Dashboard:

- View live sessions
 - Analytics on common queries
 - Agent feedback loop
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4. Setup Instructions

4.1 Prerequisites:

- Python 3.10+
- Node.js (if building frontend locally)
- FlutterFlow account
- Access to your vector DB provider

4.2 Installation Steps:

- Clone the repo
 - Set up a `.env` file with API keys
 - Run: `uvicorn main:app --reload`
 - Deploy frontend via FlutterFlow or export to Flutter
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5. API Endpoints

5.1 POST /ask

- Description: Ask a question to the AI agent
- Body: { "query": "How do I reset my password?" }
- Response: { "answer": "Go to settings and click 'Reset Password'" }

5.2 GET /health

- Returns service status

5.3 POST /feedback

- Submit agent response feedback
 - Body: { "session_id": "abc123", "feedback": "positive" }
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6. Embedding & RAG Configuration

6.1 Embedding Model:

- SentenceTransformers: all-MiniLM-L6-v2 or similar
- Hosted locally for privacy and speed

6.2 Chunking Strategy:

- 300-500 token text chunks
- Structured by headings
- Overlap: 20-30 tokens

6.3 Metadata Fields:

- source: "manual"
 - section: "4.2 Installation Steps"
 - tags: ["installation", "setup", "deployment"]
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7. Common Issues & Solutions

Issue: API not responding

Solution:

- Check .env variables
- Ensure backend is running: `uvicorn main:app --reload`
- Validate CORS config

Issue: Frontend not connecting to backend

Solution:

- Ensure endpoint is correctly configured in FlutterFlow
 - Validate network tab for 404 or CORS errors
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8. Maintenance & Updating

- Run `pip freeze > requirements.txt` after adding dependencies
 - Re-train embeddings and re-index vector DB when updating the manual
 - Monitor logs and feedback for retraining
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9. Contact & Support

- Email: support@echodesk.ai
- GitHub: github.com/echodesk/helpdesk
- Slack: echodesk-community.slack.com