# **🧠 Minimal AI Customer Support Agent – Full Stack Challenge**

### **Objective**

Build a full-stack application: a simple **AI-powered customer support chat app** that authenticates users, allows them to chat with an AI assistant, and stores the chat history.

## **🚀 Features to Implement**

### **👤 Authentication (JWT)**

* Signup / Login / Logout using JWT
* Passwords hashed using bcrypt
* Protected routes

### **💬 Chat System**

* Text input box for user
* Display AI-generated responses
* Save chat history in MongoDB (user-scoped)
* Show past conversations

### **🧠 AI Integration (Choose One)**

* **OpenRouter.ai** (supports many open LLMs with free access)
* **Hugging Face Inference API** (e.g. for DialoGPT or similar)
* Self-hosted or free-tier-compatible models (optional)

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### **📡 Backend (Node.js + Express)**

* /auth/signup, /auth/login
* /chat/send (accepts message, returns response)
* /chat/history (returns user’s chat logs)

### **🌐 Frontend (React)**

* React app with a chat UI
* Use **Axios/Fetch** for API calls
* Handle auth token securely
* Use basic CSS or Tailwind (optional)

### **🌐 DevOps**

* Dockerize the app
* App should work with docker compose up command

## **📦 Tech Stack**

| **Layer** | **Tech** |
| --- | --- |
| Frontend | React (Vite or CRA) |
| Backend | Node.js + Express |
| Database | MongoDB Atlas (Free tier) |
| Auth | JWT + Bcrypt |
| AI | OpenRouter / Hugging Face |
| Hosting | Vercel / Netlify / Render / Railway (any free-tier) |

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## **⚙️ Bonus (Optional)**

* Add typing indicator
* Add rate limiting (express-rate-limit)
* Add environment switching (dev/prod configs)

## **📁 Deliverables**

1. GitHub repository with:  
   * client/ and server/ folders
   * .env.example files
   * Clear README with setup steps
2. Deployed link

## **⏱️ Estimated Time: 6–10 hours (Depending on bonus features)**