# 📝 Dynamic Chatbot Web App – Design Document

## 📌 Project Overview

Name: Dynamic Chatbot

Purpose: A fun, interactive chatbot experience that collects user data, allows file uploads, and sends the details via email (with optional AI-like personalities and animations).

Target Users: Web visitors or product testers who want to explore conversational UI and submit feedback or personal stories.

## 💡 Features

🧠 Chatbot Flow

- Animated, dynamic chat interface using React & Framer Motion.

- Supports multiple bot personas (FriendlyBot, TechBot, ConfessionBot).

- Collects: User Name, Email, Freeform Message, Optional File Upload

- Voice input via Web Speech API.

- Joke generator via external API.

📧 Email Sending

- Backend built with Node.js + Express.

- Handles multipart/form-data for file + text.

- Sends email using Nodemailer.

- Uploaded file sent as email attachment.

## 🔧 Architecture

Frontend (React + Vite)

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|---> Sends FormData via POST to /send-email

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Backend (Node.js + Express)

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|---> Processes data and file

|---> Sends via Nodemailer to destination email

## 🖥️ Frontend

Tech Stack: React, Vite, Framer Motion

Deployment: Render (Static Site)

Build Command: npm run build

Publish Directory: dist

Structure:

frontend\_chatbot/  
├── src/  
│ ├── main.jsx  
│ ├── App.jsx  
│ ├── chatbot.css  
│ └── components/  
│ └── AnimatedChatBot.jsx  
├── public/  
│ └── index.html  
├── package.json  
├── vite.config.js

## ⚙️ Backend

Tech Stack: Node.js, Express, Nodemailer, Multer, dotenv

Endpoint: POST /send-email

Environment Variables:

EMAIL\_USER=your\_email@gmail.com

EMAIL\_PASS=your\_app\_password

Deployment: Render (Web Service)

Start Command: node index.js

## ✅ Validation & Error Handling

- Email format validated using RegEx.

- File type/size not restricted (but can be added).

- Displays response messages based on server status.

## 🧪 Testing

- Manual testing with different file types and input flows.

- Check for:

- Successful email delivery

- File attached

- Input validation

- UI animations

- Joke API fallback

- Voice input functionality

## 🚀 Future Enhancements

- Add image and audio support

- User login / auth

- AI model integration for smarter replies

- Save chat history to database

- Add bot typing animation