

Project Documentation: AI Abandoned Cart Call MVP (Test 1)

1. Overview

This project is a **FastAPI-based MVP** that uses AI to generate a polite call script for customers who abandoned their shopping cart and then makes an automated phone call via **Twilio**.

2. Files

main.py

- **Purpose:** Main application script that:
 - Holds fake abandoned cart data.
 - Generates AI call script using **Groq**.
 - Initiates a call using **Twilio**.
 - Exposes a FastAPI endpoint `/call-customer` to trigger the call.
- **Key Sections:**

```
# 1. Load environment variables and initialize FastAPI
load_dotenv()
app = FastAPI()

# 2. Fake Abandoned Cart Data
FAKE_CART = {
    "customer_name": "Rahul Sharma",
    "phone": "+917499902809",
    "items": ["Wireless Headphones", "Bluetooth Speaker"],
    "cart_value": 4098,
    "discount_code": "SAVE10"
}

# 3. AI Script Generator using Groq
def generate_script(cart):
    client = Groq(api_key=os.getenv("GROQ_API_KEY"))
    prompt = f"Create a polite 20-second call script for customer {cart['customer_name']}..."
    response = client.chat.completions.create(
        model="llama-3.1-8b-instant",
        messages=[{"role": "user", "content": prompt}]
    )
```

```
return response.choices[0].message["content"]
```

4. Twilio Call Function

```
def call_customer_twilio(message, phone):  
    client = Client(os.getenv("TWILIO_ACCOUNT_SID"),  
os.getenv("TWILIO_AUTH_TOKEN"))  
    call = client.calls.create(  
        to=phone,  
        from_=os.getenv("TWILIO_NUMBER"),  
        twiml=f"<Response><Say>{message}</Say></Response>"  
    )  
    return call.sid
```

5. API Endpoint to trigger call

```
@app.get("/call-customer")  
def call_customer():  
    script = generate_script(FAKE_CART)  
    sid = call_customer_twilio(script, FAKE_CART["phone"])  
    return {"status": "call started", "call_sid": sid, "script": script}
```

.env

- **Purpose:** Store sensitive credentials and API keys securely.

Twilio Credentials

```
TWILIO_ACCOUNT_SID=(ADD)
```

```
TWILIO_AUTH_TOKEN= (ADD)
```

```
TWILIO_NUMBER=+15752503566
```

```
TWILIO_TEST_NUMBER=+917499902809
```

Groq API Key

```
GROQ_API_KEY="YOUR KEY"
```

3. How it works

1. Start the FastAPI server:

```
uvicorn main:app --reload --host 0.0.0.0 --port 8000
```

2. Call the endpoint in the browser or Postman:

GET <http://127.0.0.1:8000/call-customer>

3. The server:
 - a. Uses **Groq** to generate a friendly call script.
 - b. Uses **Twilio** to initiate the phone call.
4. Returns JSON response:

```
{  
  "status": "call started",  
  "call_sid": "CAxxxxxxxxxxxxxxxxxxxxxx",  
  "script": "Hello Rahul Sharma, ..."  
}
```

4. Notes

- Make sure the phone number in `FAKE_CART` is verified in Twilio.
- Groq model used: `"llama-3.1-8b-instant"`
- Avoid committing `.env` to public repositories.