Advanta AI – Full Developer Build Spec

# 📌 Overview

This document outlines the full implementation plan for the Advanta AI Workflow Automation Builder. It includes the system architecture, Replit setup, OAuth flows, GPT parsing, frontend components, backend logic, database design, and app integrations.

# 🧠 Goal

Create an AI-powered workflow builder that:  
- Accepts natural language automation commands  
- Uses GPT to convert input into structured workflows  
- Lets users connect third-party apps via OAuth  
- Simulates/test-runs the workflows  
- Stores user workflows and logs for reuse

# 🧩 System Architecture

User ➝ React Frontend ➝ FastAPI Backend ➝ GPT API ➝ OAuth APIs ➝ Supabase/Postgres

# 🛠 Replit Starter Repo

Download the starter repo: [advanta\_ai\_replit\_starter.zip]  
- Frontend: React + Tailwind components  
- Backend: FastAPI  
- Integrations: Slack, Notion, Airtable, Calendly  
- OAuth scaffolding  
- Prompt input + GPT processing  
- Mock data and test runners

# 🧠 GPT Agent Prompt Logic

Prompt:  
"You are an AI workflow generator. Take natural language and return a JSON workflow with trigger and steps."  
  
Example:  
Input: When I get a new Calendly booking, send a Slack message and update Notion.  
Output: JSON with trigger, actions, and variables like {{booking.name}}

# 🔐 OAuth & Token Management

- Use OAuth 2.0 for each platform  
- Redirect to third-party login → receive token  
- Store tokens securely (encrypted)  
- Allow disconnecting apps via dashboard

# 📊 Frontend Components

- PromptInput.jsx  
- WorkflowPreview.jsx  
- StepEditor.jsx  
- WorkflowRunner.jsx  
- IntegrationDashboard.jsx

# 🔗 Supported Integrations

Slack, Notion, Airtable, Calendly, Google Sheets, Gmail, Discord, Trello, Asana, ClickUp, HubSpot, Salesforce, Shopify, Stripe, Zoom, Webhooks, Typeform, Google Drive, Dropbox, Microsoft Teams, Mailchimp, SendGrid, Intercom, WhatsApp, Twilio

# 🗃️ Database Schema

- users: id, email, plan, created\_at  
- workflows: id, user\_id, name, json, created\_at  
- connections: user\_id, app\_name, token, refresh\_token  
- logs: run\_id, workflow\_id, status, outputs, timestamps

# 🧪 Workflow Simulation Engine

- Load mock\_data.json  
- Replace template variables (e.g. {{booking.name}})  
- Step-by-step preview mode  
- Execution logging and error display

# ✅ Developer Deliverables

- GPT-powered parser with prompt tuning  
- OAuth flows for key apps  
- Backend routes to save/run workflows  
- Frontend UI to build and edit workflows  
- Full Replit deployment