**AI Packaging Design MVP – Project Setup Checklist**

**1. Repository & Project Structure**

- [X] Create a new GitHub repository for the project.

- [X] set up a monorepo or two separate folders: `/frontend` and `/backend`.

- [X] Add a `.gitignore` file for Node, Python, and environment files.

- [X] Add a `README.md` with project overview and stack.

**2. Frontend Setup (Next.js + Tailwind)**

- [ ] Initialize a new Next.js app in `/frontend` (with TypeScript).

- [ ] Set up Tailwind CSS in the Next.js app.

- [ ] Add basic folder structure: `components/`, `pages/`, `styles/`, `utils/`.

- [ ] Commit and push the initial frontend setup to GitHub.

**3. Backend Setup (FastAPI)**

- [ ] Initialize a new FastAPI project in `/backend`.

- [ ] Set up a Python virtual environment.

- [ ] Add `requirements.txt` with FastAPI, Uvicorn, and other essentials.

- [ ] Add basic folder structure: `app/`, `app/main.py`, `app/routes/`, `app/models/`.

- [ ] Commit and push initial backend setup to GitHub.

**4. Supabase Project Setup**

- [ ] Create a new project on [Supabase](https://supabase.com/).

- [ ] Set up PostgreSQL database.

- [ ] Set up Supabase Auth (email/password, social login).

- [ ] Set up Supabase Storage (for file uploads).

- [ ] Note down API keys and project URL for integration.

**5. Environment Configuration**

- [ ] Create `.env.local` files for both frontend and backend.

- [ ] Add Supabase project URL and anon/public keys to frontend.

- [ ] Add Supabase service role key (if needed) to backend.

- [ ] Add Hugging Face/Replicate API keys to backend.

**6. Deployment Setup**

- [ ] Connect frontend repo to Vercel for auto-deploy.

- [ ] Connect backend repo to Railway (or Render/Heroku) for auto-deploy.

- [ ] Set environment variables in Vercel and Railway dashboards.

**7. Monitoring & Error Tracking**

- [ ] Create a Sentry project for frontend and backend.

- [ ] Add Sentry DSN to both codebases and environment configs.

**8. CI/CD & Code Quality**

- [ ] Set up Prettier and ESLint for frontend (Next.js).

- [ ] Set up Black and isort for backend (Python).

- [ ] Add basic GitHub Actions workflow for linting and tests.

**9. Documentation & Onboarding**

- [ ] Update `README.md` with setup instructions for both frontend and backend.

- [ ] Document environment variables and secrets needed.

- [ ] Add a `CONTRIBUTING.md` for future collaborators.

**10. First Test Run**

- [ ] Run frontend locally and verify it loads.

- [ ] Run backend locally and verify FastAPI docs (`/docs`) are accessible.

- [ ] Test connection to Supabase from both frontend and backend.

- [ ] Deploy both to staging and verify live URLs.