

Assignment – Full-Stack AI-Enabled CRM

Objective

Build a **basic-CRM system** that is:

- **More intuitive than Pipedrive** (clean pipeline UI, drag & drop deals).
- **More feature-rich than Salesforce** (service-specific dashboards, advanced filters).
- **Native to Instagram/WhatsApp** (auto-create deals/leads from messages).
- **AI-assisted** (entity extraction, summaries, next-step suggestions).

Core Features to Implement

1. **Deal Pipeline (Kanban Board)**
 - Columns: *Qualified* → *Contacted* → *Negotiation* → *Closed*.
 - Drag & drop between stages with real-time updates.
 - Quick actions on each deal card.
2. **Service-Based Management**
 - Services: Photography, Makeup, Decor, Planning.
 - Switching service updates pipeline and metrics.
3. **Instagram Integration**
 - Provide webhook-style endpoints or input simulation.
 - Auto-create/update leads and deals when messages arrive.
 - Store full communication history.
4. **AI Assistance**
 - Extract structured details from free text (e.g., name, city, date, budget, service).
 - Summarize conversations into concise notes.
 - Suggest “Next Best Action” (e.g., send quote, follow up in 2 days).
5. **Advanced Features**
 - Search & filtering (by service, stage, city, budget).

Example Workflow

Incoming message:

Hi, bridal makeup on Dec 10 in Delhi, budget 45k.

System should:

1. Create or update a **Lead** (service=makeup, city=Delhi, date=Dec 10, budget=45k).
2. Attach to a new **Deal** in *Qualified*.
3. Generate **AI Summary**: “Lead requesting bridal makeup in Delhi on Dec 10, budget 45k.”
4. Suggest **Next Step**: “Send standard bridal quote, follow up in 2 days.”

Deliverables

Your submission should include:

1. **GitHub Repository** with:
 - Backend code + setup instructions (README.md).
 - Frontend code + setup instructions.
 - AI microservice integration.
 - Docker setup (optional but preferred).
2. **Seed Data Script** with at least:
 - 20+ leads.
 - 30+ deals across multiple services.
3. **Webhook Payloads**
 - Sample requests (Postman collection or cURL examples).
 - At least 2 payloads each for Instagram and WhatsApp.
4. **Documentation**
 - README with run instructions.
 - Short explanation.
 - Clear API usage examples.
5. **Demo**
 - A short Loom/video demo (5–10 minutes) walking through the solution.

Evaluation Criteria

- **Architecture & Scalability** – clean separation of concerns.
- **User Experience** – intuitive and responsive CRM workflow.
- **Backend & Data Design** – well-structured, efficient, secure.
- **AI Integration** – useful and accurate outputs.
- **Code Quality** – readability, maintainability, documentation, testing.

Timebox

- Expected: **3-4 days** .
- Submit even if incomplete – include what you'd build next.