Formless

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Problem

Users waste time re-entering similar information across long and semantically inconsistent online forms.

User & Core Use Case

Professionals frequently fill out repetitive yet semantically varied forms — such as **job applications**, **startup incubator applications**, or **visa forms** — where many fields overlap but differ in phrasing or include **open-ended questions**. Existing autofill tools like Lightning Autofill or JobFill only work for fixed personal info patterns (e.g., name, email) and fail to handle **semantic variations**, **open-text reasoning**, and **multi-choice** inputs.

Solution Sketch

Formless is a Chrome AI extension that automatically fills any online form by combining form parsing, semantic reasoning, and context-aware generation.

It works in four modular steps:

1. **Parser** — scans the webpage, extracts form field metadata (`name`, `type`, `description`, `DOM info`) and generates a structured JSON template.
2. **Memory Hub** — stores user-uploaded info (PDFs, resumes, essays) and pre-defined prompts for reasoning.
3. **Composer** — matches form fields with the most relevant memory and generates answers (including open-ended ones) dynamically.
4. **Filler** — fills the webpage DOM based on the composed output.

A simple Chrome UI offers three actions:

- **Select Form Field**: pick which form field to parse
- **Select Memory**: choose which memory to go
  - Long-term Memory: Personal Info, Skills, Work Experiences, Passport
  - Short-term Memory: job-specific info, field-related info etc.
- **Fill**: auto-complete all fields

A web page frontend that enables users to create, view and edit memories. Memories can be created by parsing pdfs, images or other files. Each memory item includes:

- **Intent** — What kind of field this memory is intended to fill. It can be rough and flexible, and will be matched to form fields semantically (e.g. `why_join_company`).

- **Value** — Either a **Text** (e.g. `George`) or a **Prompt** (e.g. "Write why I want to work at this company using the themes: user impact, fast iteration, ownership.").
- **Type** — `text` (directly fill) or `prompt` (let AI generate).

MVP Scope (1–2 weeks)

Build a minimal working demo:

- Test on a simulated simple static page with basic input fields as example.
- Ensure composer → filler pipeline works end-to-end.
- Set up a memory hub page (no separation between long-term and short-term yet).
- Remove field selection logic and simplify parser to handle all form fields by DOM id directly.

Demo link: https://youtu.be/vjF5MZRi5Dw

Tech Plan

Tools:

- Frontend: JS, Chrome Extension (Manifest V3 + Content Script + Popup UI)
- Backend: Python, FastAPI / Chroma DB / PostgreSQL
- Parsing: DOM inspection + attribute extraction
- LLM: OpenRouter API

Top Risks:

- Handling diverse DOM structures across different sites
- Long LLM processing time when there're multiple forms with multiple kinds

Success Metric:
80%+ of fields correctly filled on 3+ real-world forms (job/internship/startup applications) with minimal manual edits.