

Portfolio Enhancement PRD – AI-Powered Product Portfolio (Replit)

1. Purpose & Vision

Expand the existing Replit-hosted portfolio into a polished, data-driven showcase that:

- Impresses **hiring managers, investors, and startup clients**.
- Demonstrates AI/GenAI leadership through interactive, measurable case-studies.
- Leverages current stack (Replit, Postgres, Claude API) while remaining simple to maintain.

2. In-Scope Enhancements

#	Theme	Deliverable
E-1	Home “Impact” Section	Hero + 3 metric counters fed from DB (e.g. startups funded, ARR generated).
E-2	Case Study Engine	Markdown → HTML builder using Claude to draft copy, auto-generate timeline, charts.
E-3	Visual Gallery	Lightbox for images, Whimsical flow diagrams, Chart.js KPI embeds.
E-4	Testimonials Module	Postgres-backed quotes table, carousel UI.
E-5	CTA + Contact	Persistent CTA banner + Calendly embed.
E-6	Admin Dashboard	Secure <code>/admin</code> route to add/edit projects, testimonials, metrics.
E-7	Design System	Tailwind palette + component library (cards, buttons, modals).
E-8	Analytics & A/B	Simple page-view logging + toggle CTA variants.

Out of Scope: new blogging engine (phase-2), full localization.

3. Functional Requirements

3.1 Case Study CRUD

- **Create/Edit:** Admin enters bullet points → POST `/api/case` → Claude API drafts markdown → saved to `case_studies` table.
- **Read:** Public GET `/case/:slug` renders markdown to HTML with embedded charts.
- **Delete/Archive** flag only; physical delete disabled.

3.2 Metric Counters

- Daily job aggregates metrics (e.g. total ARR) into `site_metrics` table.
- Homepage fetches via `/api/metrics` (returns JSON `{key,value}`) and animates counters.

3.3 Testimonials

- `testimonials` table fields: id, author, role, company, quote, logo_url, featured (bool).
- Carousel auto-rotates every 6s; pause on hover.

3.4 Admin Auth

- Use Replit built-in auth or JWT. Role = `admin`.
- Access to `/admin/*` gated; 401 for unauth users.

3.5 Analytics

- Middleware logs route + timestamp into `page_views` table.
- Simple `/admin/analytics` chart (last 30 days views).

4. UI / UX Requirements

Area	Requirement
Typography	Inter (sans-serif); H1 3rem, H2 2rem, Body 1rem.
Color Palette	Primary <code>#2563eb</code> , Accent <code>#14b8a6</code> , Neutral greys.
Grid	12-col responsive; max-width 1280px.
Animations	Fade-in on scroll (200 ms), counter odometer effect, image zoom-on-hover.
Accessibility	WCAG AA: alt text, min 4.5:1 contrast, keyboard nav.
Performance	LCP < 2.5 s; images lazy-load; bundle < 300 kB gzip.

Wireframes

Home: Hero → Impact counters (E-1) → Top 3 projects cards → Testimonials → CTA banner. *Case Study:* Cover image + summary metrics → Problem → Process → Outcome (chart) → Carousel of screens → CTA. *Admin:* Sidebar nav (Projects, Testimonials, Metrics) → CRUD forms.

5. Data Model (Postgres)

```
TABLE case_studies (  
  id SERIAL PRIMARY KEY,  
  slug TEXT UNIQUE,  
  title TEXT,  
  summary TEXT,
```

```

    markdown TEXT,
    hero_url TEXT,
    created_at TIMESTAMP DEFAULT now(),
    published BOOLEAN DEFAULT true
);
TABLE testimonials (...);
TABLE site_metrics (...);
TABLE page_views (...);

```

6. API Endpoints

Method	Route	Auth	Purpose
GET	/api/cases	public	list published case studies
POST	/api/case	admin	create via Claude draft
PATCH	/api/case/:id	admin	update
GET	/api/metrics	public	fetch counters
POST	/api/testimonial	admin	add quote

Claude integration: server calls Claude with prompt `"Write a case study..."` → returns markdown → saved.

7. Non-Functional Requirements

- Uptime 99%.
- Claude response ≤ 3 s.
- Secure stored creds (Replit Secrets). CSRF tokens for admin forms.

8. Milestones

Week	Deliverable
1	Tailwind design system, DB migrations
2	Case Study CRUD + Claude draft
3	Public pages (Home, Project grid, Case view)
4	Metrics API + counters, testimonials module
5	Admin dashboard & auth
6	Analytics logging, performance pass, launch

9. Acceptance Criteria (sample)

- Creating a case study via admin generates a Claude draft, editable in UI.
- Homepage counters animate and display DB values.
- Carousel rotates testimonials & is keyboard accessible.
- LCP measured at <2.5 s on mobile via Lighthouse.
- All images have alt text verified by automated lint.

End of PRD v0.1