

HOME - PROTOTIPO INTERATIVO

Danilo Novais Portfolio Homepage

Technical Documentation & Design Specifications

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Version: 3.0

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Status:  Ready for Implementation

1. PROJECT OVERVIEW

1.1 Vision & Goals

Create a premium institutional portfolio that demonstrates design excellence not just through showcased work, but through the site's own execution. The homepage must:

- Establish immediate credibility through atmospheric visual design and editorial sophistication
- Guide visitors intuitively from brand introduction → work showcase → contact
- Feel distinctive and memorable without sacrificing usability or accessibility
- Perform flawlessly across all devices and connection speeds
- Reflect the designer's philosophy: "You don't see design. But it sees you."

Success looks like:

- Visitors spending 2+ minutes exploring the portfolio
- High engagement with featured projects (50%+ click-through)
- Contact form conversions from qualified leads
- Zero accessibility violations (WCAG AA minimum)
- Lighthouse scores: Performance 90+, Accessibility 100, Best Practices 100

1.2 Target Audience

Primary:

- Brand managers and marketing directors at mid-to-large companies seeking design partners
- Creative agencies looking for freelance brand designers or collaborators
- Startups and scale-ups needing brand identity and campaign work

Secondary:

- Design recruiters and HR professionals
- Fellow designers and creative community (peer recognition)
- Potential collaborators for interdisciplinary projects

User Needs:

- Quickly understand what Danilo does and his areas of expertise
- See evidence of high-quality work across branding, campaigns, and digital
- Assess cultural fit and working style
- Easily initiate contact

1.3 Key Success Metrics

Engagement: Average session duration, scroll depth, interaction rate

Conversion: Contact form submissions, portfolio page visits

Technical: Page load time <3s, Core Web Vitals passing, 0 console errors

Accessibility: WCAG AA compliance, keyboard navigation coverage

1.4 Technical Constraints

- No localStorage/sessionStorage in artifacts (Claude.ai environment restriction)
- Self-hosted assets where possible to avoid external dependencies
- Graceful degradation for WebGL/3D features (fallback to static alternatives)
- Mobile-first responsive design (majority of traffic expected from mobile)
- Performance budget: <2MB initial page weight, <5s time to interactive

2. DESIGN SYSTEM

2.1 Color Palette

| Token | Value | Uso |
|-----------------|-----------|---|
| bluePrimary | `#0048ff` | Cor primária da marca, CTAs, links, elementos interativos |
| blueAccent | `#4fe6ff` | Destaques secundários, brilhos "ghost"/atmosfera |
| purpleDetails | `#8705f2` | Pequenos detalhes e highlights |
| pinkDetails | `#f501d3` | Pequenos detalhes, ênfases pontuais |
| background | `#040013` | Fundo escuro principal |
| backgroundLight | `#f0f0f0` | Seções claras (forms, blocos alternados) |
| text | `#fcffff` | Texto principal em fundo escuro |
| textInverse | `#0e0e0e` | Texto em fundos claros |
| textEmphasis | `#2E85F2` | Palavras destacadas no meio do texto |
| textHighlight | `#4fe6ff` | Destaques curtos, intros breves |
| textSecondary | `#a1a3a3` | Infos secundárias, metadata |
| neutral | `#0b0d3a` | Gradientes, fundos sutis |
| neutralLight | `#F5F5F5` | Fundos de seções secundárias |

> Obs: `textEmphasis` estava com `#2E85F2` e `textHilight` com typo – normalizei para `textHighlight`.

2.2 Typography

Fonte primária: TT Norms Pro (self-hosted, fallback: `ui-sans-serif, system-ui`)

Tokens de texto **responsivos** (usando `clamp`) para manter coerência em todos os breakpoints:

| Token | Mobile (~<640px) | Desktop (~≥1024px) | Peso | Uso |
|---------|------------------|--------------------|---------|---|
| display | 2.5rem (40px) | 4.5rem (72px) | Black | Frases grandes no meio da página, não-semânticas (Big Phrase) |
| h1 | 2rem (32px) | 3.5rem (56px) | Bold | Hero headlines, títulos principais |
| h2 | 1.5rem (24px) | 2.5rem (40px) | Bold | Títulos de seção |
| h3 | 1.25rem (20px) | 1.75rem (28px) | Medium | Títulos de cards, subtítulos |
| body | 1rem (16px) | 1.125rem (18px) | Regular | Texto corrido |
| small | 0.875rem (14px) | 0.875rem (14px) | Reg/Med | Labels, legendas |
| micro | 0.75rem (12px) | 0.75rem (12px) | Mono | Tags, infos de sistema |

Tokens em CSS com `clamp()`

```
[ 'css
:root {
  --font-display: clamp(2.5rem, 5vw, 4.5rem);
  --font-h1:      clamp(2rem, 4vw, 3.5rem);
  --font-h2:      clamp(1.5rem, 3vw, 2.5rem);
  --font-h3:      clamp(1.25rem, 2vw, 1.75rem);
  --font-body:    clamp(1rem, 1.2vw, 1.125rem);
  --font-small:   0.875rem;
  --font-micro:   0.75rem;
}

body {
  font-family: "TT Norms Pro", ui-sans-serif, system-ui, -apple-system,
  BlinkMacSystemFont,
  "Segoe UI", sans-serif;
}

.display-text {
  font-size: var(--font-display);
  font-weight: 700;
  line-height: 1.1;
}
```

```
.h1 {
  font-size: var(--font-h1);
  font-weight: 700;
  line-height: 1.1;
}

.h2 {
  font-size: var(--font-h2);
  font-weight: 700;
  line-height: 1.15;
}

.h3 {
  font-size: var(--font-h3);
  font-weight: 500;
  line-height: 1.2;
}

body {
  font-size: var(--font-body);
  font-weight: 400;
  line-height: 1.5;
}

.small {
  font-size: var(--font-small);
}

.micro {
  font-size: var(--font-micro);
  font-family: ui-monospace, SFMono-Regular, Menlo, Monaco, Consolas,
    "Liberation Mono", "Courier New",
    monospace;
}
```

Versão conceitual em Tailwind

```
// tailwind.config.js
module.exports = {
  theme: {
    extend: {
      fontFamily: {
        sans: ['"TT Norms Pro"', 'ui-sans-serif', 'system-ui'],
      },
      fontSize: {
        display: [
          'clamp(2.5rem, 5vw, 4.5rem)',
          { lineHeight: '1.1', fontWeight: '700' },
        ],
        h1: [
          'clamp(2rem, 4vw, 3.5rem)',
          { lineHeight: '1.1', fontWeight: '700' },
        ],
        h2: [
          'clamp(1.5rem, 3vw, 2.5rem)',
```

```
        { lineHeight: "1.15", fontWeight: "700" },
    ],
h3: [
    "clamp(1.25rem, 2vw, 1.75rem)",
    { lineHeight: "1.2", fontWeight: "500" },
],
body: [
    "clamp(1rem, 1.2vw, 1.125rem)",
    { lineHeight: "1.5", fontWeight: "400" },
],
small: ["0.875rem", { lineHeight: "1.4" }],
micro: ["0.75rem", { lineHeight: "1.4" }],
},
},
},
},
}];'
```

2.3 Spacing & Grid

Container

- max-width: 1680px
 - Padding horizontal: clamp(24px, 5vw, 96px)

Ritmo Vertical

- Seções: py-16 md:py-24
 - Componentes: gap-8 md:gap-12
 - Elementos internos: qap-4 md:qap-6

Grid (Tailwind)

- Mobile (até md):
 - Layout: 1 coluna (grid-cols-1 ou flex flex-col)
 - w-full
 - Alinhamento:
 - text-center para todos os textos
 - items-center e justify-center para stacks verticais (flex-col)
 - Tablet (md:):
 - Cards em md:grid-cols-2
 - Hero / destaques podem continuar 1 coluna
 - Textos podem voltar a text-left se fizer sentido
 - Desktop (lg:+):
 - Distribuição customizada por seção
 - Textos geralmente alinhados à esquerda para leitura longa

Regra de alinhamento para mobile (base do sistema):

Breakpoint padrão: < 768px

Regra:

- Todos os títulos (display, h1, h2, h3), parágrafos e CTAs usam text-align: center.
 - Componentes em coluna usam align-items: center.
 - Imagens e ícones principais centralizados (margin-inline: auto).

Exemplo padrão de seção:

```
<section className="flex flex-col items-center text-center md:items-start  
md:text-left">  
  {/* conteúdo */}  
</section>
```

2.4 Animation Principles

Filosofia: animações orgânicas e intencionais, nunca gratuitas.

Core Library: Framer Motion

Diretrizes:

- Animar apenas transform e opacity (performance)
- Easing: cubic-bezier(0.22, 1, 0.36, 1) (easeOutExpo)
- Duração: 300–700ms na maioria das transições
- Stagger: 60–120ms entre elementos sequenciais
- Respeitar prefers-reduced-motion: desabilitar animações não essenciais

Padrões comuns:

```
// Scroll reveal  
<motion.div  
  initial={{ opacity: 0, y: 24 }}  
  whileInView={{ opacity: 1, y: 0 }}  
  transition={{ duration: 0.6, ease: [0.22, 1, 0.36, 1] }}  
>  
  
// Hover (botões, cards)  
<motion.button  
  whileHover={{ scale: 1.02, y: -2 }}  
  transition={{ duration: 0.3 }}  
>  
  
// Staggered children  
const variants = {  
  hidden: { opacity: 0 },  
  visible: {  
    opacity: 1,  
    transition: { staggerChildren: 0.08 },  
  },  
};
```

Em mobile, como tudo é centralizado e o fluxo é vertical, as entradas preferenciais vêm de baixo (y: 24 → 0) acompanhando o scroll.

2.5 Display Text / Big Phrases (Frases em destaque)

Frases grandes no meio da página, com grande destaque visual, mas sem função de título semântico.

Token: display

Diretrizes de uso:

- Quando usar:
- Frases de impacto, statements da marca, quotes, promessas fortes de seção.
- Semântica:
- Usar como `<p>` ou `` com classe específica:
- `className="display-text"` ou `className="text-display"`
- Exemplo:

```
<p className="text-display">  
  Construímos experiências digitais que parecem magia, mas são guiadas por  
  dados.  
</p>
```

- Alinhamento:
- Mobile: sempre centralizado, com largura limitada:
- Ex.: `className="text-display max-w-2xl mx-auto text-center"`
- Desktop: pode ser centralizado ou seguir a grid da seção (recomendado manter centralizado em blocos de destaque).
- Espaçamento:
- Mais respiro que títulos normais:
- Ex.: `mt-16 mb-12` (ajustar conforme a seção).
- Cores:
- Base: `text (#fcffff)`
- Palavras-chave com `textEmphasis` e `textHighlight`.

Exemplo em JSX/Tailwind:

```
<section className="py-16 flex flex-col items-center text-center">  
  <p className="text-display max-w-2xl mx-auto">  
    Criamos produtos que parecem  
    <span className="text-textHighlight"> magia</span>, mas são construídos  
    com  
    <span className="textEmphasis"> engenharia séria</span>.  
  </p>  
</section>
```

2.6 Global Assets

Logos:

- Favicon – Usar no browser:
`'https://aymuvxysygrwoicsjgxj.supabase
.co/storage/v1/object/public/logo_site/Favicon.svg'`
- Favicon Light – Usar no browser:
`'https://aymuvxysygrwoicsjgxj.supabase
.co/storage/v1/object/public/logo_site/FaviconLight.svg'`

- Logo Light (full - Usar no header):
`https://aymuvxysygrwoiccsjgxj.supabase.co/storage/v1/object/public/logo_site/LogoLight.svg`
- Logo Dark (full - Usar no header):
`https://aymuvxysygrwoiccsjgxj.supabase.co/storage/v1/object/public/logo_site/LogoDark.svg`

2.7 Fonts:

- font-family: 'TT Norms Pro';
src:
url('https://aymuvxysygrwoiccsjgxj.supabase.co/storage/v1/object/public/assets/fonts/TT%20Norms%20Pro%20Thin.woff2') format('woff2');
font-weight: 100;
font-style: normal;
font-display: swap;
- font-face {
font-family: 'TT Norms Pro';
src:
url('https://aymuvxysygrwoiccsjgxj.supabase.co/storage/v1/object/public/assets/fonts/TT%20Norms%20Pro%20Light.woff2') format('woff2');
font-weight: 300;
font-style: normal;
font-display: swap;
- font-face {
font-family: 'TT Norms Pro';
src:
url('https://aymuvxysygrwoiccsjgxj.supabase.co/storage/v1/object/public/assets/fonts/TT%20Norms%20Pro%20Regular.woff2') format('woff2');
font-weight: 400;
font-style: normal;
font-display: swap;
- font-face {
font-family: 'TT Norms Pro';
src:
url('https://aymuvxysygrwoiccsjgxj.supabase.co/storage/v1/object/public/assets/fonts/TT%20Norms%20Pro%20Medium.woff2') format('woff2');
font-weight: 500;
font-style: normal;
font-display: swap;
- font-face {
font-family: 'TT Norms Pro';
src:
url('https://aymuvxysygrwoiccsjgxj.supabase.co/storage/v1/object/public/assets/fonts/TT%20Norms%20Pro%20Bold.woff2') format('woff2');
font-weight: 700;

```

font-style: normal;
font-display: swap;

- font-face {
  font-family: 'TT Norms Pro';
  src:
    url('https://aymuvxysygrwoicsjgxj.supabase
.co/storage/v1/object/public/assets/fonts/TT%20Norms%20Pro%20Black
.woff2') format('woff2');
  font-weight: 900;
  font-style: normal;
  font-display: swap;
}

/* Fonte Mono para Tags */
@font-face {
  font-family: 'PPSupplyMono';
  src: url('https://assets.codepen.io/7558/PPSupplyMono-Variation.woff2')
    format('woff2');
  font-weight: 100 900;
  font-style: normal;
  font-display: swap;
}

```

Videos:

- Manifesto Video:
`<https://aymuvxysygrwoicsjgxj.supabase
.co/storage/v1/object/public/project-videos/VIDEO-APRESENTACAO-PORTFOLIO
.mp4>`

Client Logos:

- 12 monochromatic SVG logos: `client1.svg` through `client12.svg`
- Base URL:
`<https://aymuvxysygrwoicsjgxj.supabase
.co/storage/v1/object/public/client-logos/>`

3. SITE ARCHITECTURE

3.1 Information Architecture

Homepage

- Header (persistent navigation)
- Hero + Manifesto Video
- Manifesto Video
- Portfolio Showcase (3 categories)
- Featured Projects (4 highlighted works)
- Clients/Brands (logo grid)
- Contact (form + info)
- Footer

Other Pages (linked from homepage)

- /sobre (About page)
- /portfolio (Full portfolio with filters)
- /portfolio/[slug] (Individual project pages)

3.2 Navigation Structure

Primary Navigation (Header):

- Home → `/` or `#hero`
- Sobre (About) → `/sobre`
- Portfólio → `/portfolio`
- Contato (Contact) → `#contact` (always anchors to contact section)

Secondary Navigation (Footer):

- Same as primary navigation
- Additional: Social media links

3.3 Section Flow

The homepage follows a narrative arc:

1. Header: Establishes brand identity and provides navigation
2. Hero: Creates emotional impact and communicates positioning
3. Manifesto Video: Deepens understanding through motion storytelling
4. Portfolio Showcase: Introduces work categories with editorial rhythm
5. Featured Projects: Demonstrates quality through curated examples
6. Clients/Brands: Builds credibility through association
7. Contact: Provides clear conversion path
8. Footer: Reinforces brand and provides supplementary navigation

**4. COMPONENT SPECIFICATIONS

4.1 Header

Purpose: Provide persistent, accessible navigation using a clean, static interface.

Desktop (≥1024px): Static Glass Header

Layout:

- Position: `position: sticky`, `top: 24px` (or `top: 0` with padding), `z-index: 40`
- Width: Partial container (centered), or Full-width (based on preference, images suggest clean alignment)
- Height: `64px`
- Style: Pill-shaped or Bar, translucent glass effect (`backdrop-filter: blur(12px)`), subtle border.
- **Behavior:** COMPLETELY STATIC. No movement tracking, no physics.

Content:

- Left: Logo (SVG) -
https://aymuvxysygrwoicsjgxj.supabase.co/storage/v1/object/public/logo_site/FaviconLight.svg
- Right: Navigation Links (Home, Sobre, Portfólio, Contato)

Interaction – Contrast Adaptation (Scroll):

Essential for visibility on the white 'Contato' section shown in designs.

- **Trigger:** When the header overlaps a light-colored background (e.g., the white Contact section).
- **Action:**
 - Text/Icon color switches to **Blue** (Primary Brand Color).
 - Background may increase opacity for readability.
- **Transition:** `transition: all 0.3s ease`.

****Desktop ($\geq 1024px$): Fluid Glass Header****

- Layout:
 - Position: `position: sticky`, `top: 0`, `z-index: 40`
 - Width: Partial container (not full-width), horizontally centered
 - Height: `56–72px`
 - Style: Pill-shaped with rounded corners, translucent glass effect (blur + subtle gradient)
- Content:
 - Left: Logo (Favicon Light)
https://aymuvxysygrwoicsjgxj.supabase.co/storage/v1/object/public/logo_site/FaviconLight.svg
 - Right: Horizontal navigation list (Home, Sobre, Portfólio, Contato)
- Interaction – Fluid Glass Effect:
 - The header responds to cursor movement along the X-axis:
 - Follow behavior: Subtle horizontal translation (`maxTranslateX: 40–60px`)
 - Spring physics: `followDamping: 0.08–0.12s`, gentle overshoot
 - Scale: Slight horizontal stretch (`maxScaleX: 1.05`) and vertical compression (`maxScaleY: 1.02`)
 - Visual: Refraction distortion, chromatic aberration on edges, backdrop blur
- Fallback (no WebGL / reduced motion):
 - Same layout and typography
 - Static positioning with standard backdrop-filter blur or solid/gradient background
 - No cursor-following behavior

****Mobile & Tablet ($\leq 1023px$): Staggered Menu Header****

- Layout:
 - Position: Fixed bar at top, full-width
 - Height: `48–64px`
 - Content: Logo (left), Hamburger icon (right)
- Menu Overlay (when open):
 - Fullscreen or near-fullscreen overlay
 - Gradient background (primary to neutral)
 - Navigation items in vertical column, large text, generous spacing
 - Social media icons at bottom
- Animation:
 - Open: Overlay fades in (`opacity: 0 → 1`, 200–250ms), panel slides in from right (`translateX: 100% → 0`, 260–320ms), hamburger morphs to X
 - Items appear with stagger: `opacity: 0 → 1`, `translateY: 16px → 0`, `staggerDelay: 100ms`
 - Close: Reverse sequence, items disappear in reverse order
- Interactions:
 - Tap X icon: Close menu

- Tap navigation item: Close menu + navigate
 - Tap overlay background: Close menu
 - Accessibility:
 - `aria-label` on hamburger/X icon
 - `aria-expanded` state
 - Focus trap within open menu
 - ESC key closes menu
 - Mobile-Specific Implementation Notes:
 - The header does not have the glass effect on mobile
 - The logo is positioned flush left with no additional spacing
 - The hamburger menu icon is positioned flush right with 16px padding
 - When open, the menu covers the entire viewport
-

**4.2 Hero

1.1 Objetivo

Criar uma experiência hero imersiva e responsiva que gera impacto na primeira impressão, com:

- Animação 3D interativa (fantasma espectral seguindo o cursor)
- Atmosfera escura com shader customizado
- Animações de entrada impactantes
- CTA que direciona para seção SOBRE

Inspiração: [CodePen Ghost

Animation](<https://codepen.io/danilonovaisv/pen/YPWyrdW>)

1.2 Identidade Visual

Color Palette

| Token | Value | Uso |
|---------------|-----------|------------------------------------|
| ----- | ----- | ----- |
| `bluePrimary` | `#0048ff` | CTAs, links, elementos interativos |
| `background` | `#040013` | Fundo escuro principal |
| `text` | `fcffff` | Texto principal |
| `textMuted` | `#d9dade` | Texto secundário |

Typography System

Fonte primária: TT Norms Pro (self-hosted)

```
```typescript
// Arquivos de fonte (Supabase Storage)
const fonts = {
 black:
 'https://aymuvxysygrwoicsjgxj.supabase
 .co/storage/v1/object/public/assets/fonts/TT%20Norms%20Pro%20Black
 .woff2',
 bold:
 'https://aymuvxysygrwoicsjgxj.supabase
 .co/storage/v1/object/public/assets/fonts/TT%20Norms%20Pro%20Bold.woff2',
```

```

medium:
 'https://aymuvxysygrwoicsjgxj.supabase
 .co/storage/v1/object/public/assets/fonts/TT%20Norms%20Pro%20Medium
 .woff2',
regular:
 'https://aymuvxysygrwoicsjgxj.supabase
 .co/storage/v1/object/public/assets/fonts/TT%20Norms%20Pro%20Regular
 .woff2',
};

```

```

Tokens Responsivos (usando clamp):

| Token | Mobile | Desktop | Peso | Uso |
|-----------|----------------|-----------------|---------|-------------------------------|
| `display` | 2.5rem (40px) | 4.5rem (72px) | Black | Big phrases não-semânticas |
| `h1` | 2rem (32px) | 3.5rem (56px) | Bold | Hero headlines |
| `h2` | 1.5rem (24px) | 2.5rem (40px) | Bold | Subtítulos |
| `h3` | 1.25rem (20px) | 1.75rem (28px) | Medium | Títulos de cards |
| `body` | 1rem (16px) | 1.125rem (18px) | Regular | Texto corrido |

1.3 Conteúdo

```

```tsx
// Estrutura de conteúdo
<section className="hero">
 {/* Tag decorativa */}
 [BRAND AWARENESS]

 {/* Headline - Desktop/Tablet (2 linhas) */}
 <h1 className="hidden md:block">
 Você não vê

 o design.
 </h1>

 {/* Headline - Mobile (3 linhas) */}
 <h1 className="md:hidden">
 Você não

 vê o

 design.
 </h1>

 {/* Subheading */}
 <h2>Mas ele vê você.</h2>

 {/* CTA */}
 <CTAButton href="/sobre">step inside ></CTAButton>
</section>
```

```

```
#### **CTA – Design Visual**  
- **Formato:** Compósito (Pílula à esquerda + Círculo à direita)  
- **Cor:** Azul Primário (`#0048ff`), texto branco  
- **Texto:** Uppercase, tracking médio, padding `px-6 py-3`  
- **Ícone:** Seta (→) centralizada no círculo
```

1.4 Animações

Entrada de Textos (Page Load)

```
```javascript  
// Framer Motion config
initial: {
 opacity: 0,
 scale: 0.92,
 translateY: 60,
 filter: "blur(10px)"
}

animate: {
 opacity: 1,
 scale: [1.02, 1],
 translateY: 0,
 filter: "blur(0px)"
}

transition: {
 duration: 1.2,
 easing: [0.25, 0.46, 0.45, 0.94]
}
```
```

CTA – Interações

| Estado | Dispositivo | Comportamento |
|----------------|-------------|-----------------------------------|
| **Hover** | Desktop | `translateY(-1px)` |
| **Hover Seta** | Desktop | `translateX(4px)` (opcional) |
| **Click** | Mobile | `scale(0.98)` |
| **Focus** | Teclado | Outline 2px `#4fe6ff`, offset 4px |

1.5 Elementos Visuais – Animação Ghost

Background / Atmosfera

| Aspecto | Implementação |
|------------|---|
| **Cores** | Gradiente escuro `#0a0a0a` → `#1a1a1a` |
| **Shader** | Plano 300×300 com material customizado (_atmosphere_) |

```

| **Halo Circular** | Usa `revealRadius`, `fadeStrength`, `baseOpacity`,  

| `revealOpacity` |
| **Pós-processamento** | Opcional: grain, bleeding, scanlines, vignette  

| (shader analógico) |

```

Personagem Ghost

| Elemento | Implementação |
|----------------|---|
| **Geometria** | `THREE.SphereGeometry(2, 40, 40)` com vértices inferiores deformados |
| **Material** | `MeshStandardMaterial` com alta `emissiveIntensity` |
| **Cor** | Controlada via `bodyColor`, rim lights azulados |
| **Olhos** | `Group` com esferas menores + glows transparentes |
| **Fireflies** | 20 vagalumes (esferas amarelas + `PointLight`) |
| **Partículas** | Pool de formas pequenas (esfera/tetraedro/octaedro) que nascem no movimento |

Interação com Mouse

```

```javascript
// Conversão screen → world
x = (event.clientX / window.innerWidth) * 2 - 1
y = (event.clientY / window.innerHeight) * 2 - 1

// Seguimento suave
targetX = mouseX * viewport.width * 0.5
targetY = mouseY * viewport.height * 0.3
position.x += (targetX - position.x) * followSpeed

// Oscilações constantes (sin/cos)
floatY = sin(time * 1.5) * 0.05 + cos(time * 0.7) * 0.03
```

```

Layout

```

```css
/* Centralização com Flexbox */
.hero-content {
 display: flex;
 flex-direction: column;
 justify-content: center;
 align-items: center;
 height: 100vh;
}
```
---
```

1.6 Responsividade

Textos

Desktop/Tablet (≥768px):

```
```
```

```
H1: "Você não vê" (linha 1)
 "o design." (linha 2)
Fonte: TT Norms Pro Black, 6–9rem
```
```

Mobile (<768px):

```
H1: "Você não" (linha 1)
    "vê o" (linha 2)
    "design." (linha 3)
Fonte: TT Norms Pro Black, 6–9rem
```
```

#### #### \*\*Performance Adaptativa\*\*

```
```javascript
// Ajustes por dispositivo
const config = {
  desktop: {
    fireflies: 20,
    particles: 50,
    postProcessing: true,
    pixelRatio: 2
  },
  tablet: {
    fireflies: 10,
    particles: 25,
    postProcessing: false,
    pixelRatio: 1
  },
  mobile: {
    fireflies: 5,
    particles: 10,
    postProcessing: false,
    pixelRatio: 1
  }
};
```

Fallback Touch

- Em dispositivos touch onde `mousemove` não ocorre: manter fantasma centralizado
- Rodar apenas animação de flutuação
- Detectar `pointer: coarse` e reduzir efeitos

1.7 Acessibilidade

Semântica HTML

```
```tsx
<section className="hero" aria-label="Seção principal de apresentação">
 <h1>Você não vê o design.</h1>
```

```
<h2>Mas ele vê você.</h2>

/* Canvas decorativo */
<div role="presentation" aria-hidden="true">
 <Canvas />
</div>

/* Descrição alternativa */
<p className="sr-only">
 Animação decorativa de um fantasma flutuante com partículas luminosas
</p>
</section>
```

```

Contraste

- `#fcffff` em `#040013`: **19.5:1** ✓ WCAG AAA
- `#d9dade` em `#040013`: **15.8:1** ✓ WCAG AAA

Prefers-Reduced-Motion

```
```tsx
const prefersReducedMotion = useReducedMotion();

if (prefersReducedMotion) {
 return <StaticGhostFallback />;
}

return <AnimatedGhostCanvas />;
```
---
```

1.8 Estrutura de Arquivos

```
```
app/
 -- components/
 -- Hero.tsx
 -- HeroText.tsx # Container principal
 -- GhostScene.tsx # Conteúdo semântico
 -- Ghost.tsx # Canvas WebGL (dynamic import)
 -- Atmosphere.tsx # Personagem 3D
 -- Fireflies.tsx # Shader de fundo
 -- Preloader.tsx # Vagalumes
 -- CTAButton.tsx # Loading inicial
 -- Call-to-action
 -- lib/
 -- hooks/
 -- usePerformanceAdaptive.ts
 -- useReducedMotion.ts
 -- useMouse.ts
 -- utils/
 -- cn.ts
 -- styles/
```

```
└─── globals.css
```

```
...
```

```

```

### ### \*\*1.9 Z-Index Stack\*\*

```
```typescript
const zIndex = {
  preloader: 50,      // Tela de carregamento
  ghostCanvas: 20,    // Canvas WebGL (sempre acima do texto)
  heroContent: 10,    // Textos e CTA
  background: 0,      // Gradiente de fundo
};

...
```

```
---
```

1.10 Implementação – Componentes Principais

Hero.tsx

```
```tsx
import dynamic from 'next/dynamic';
import { Suspense } from 'react';
import HeroText from './HeroText';
import Preloader from './Preloader';

const GhostScene = dynamic(() => import('./GhostScene'), { ssr: false });

export default function Hero() {
 return (
 <section className="relative h-screen w-full bg-[#040013]
 text-[#fcffff] overflow-hidden">
 <Preloader />
 <HeroText />
 <Suspense fallback={null}>
 <GhostScene />
 </Suspense>
 </section>
);
}

...
```

#### #### \*\*HeroText.tsx\*\*

```
```tsx
import { motion } from 'framer-motion';

const textAnimation = {
  initial: {
    opacity: 0,
    scale: 0.92,
    y: 60,
    filter: 'blur(10px)',
  }
};
```

```
},
animate: {
  opacity: 1,
  scale: [1.02, 1],
  y: 0,
  filter: 'blur(0px)',
},
transition: {
  duration: 1.2,
  ease: [0.25, 0.46, 0.45, 0.94],
},
};

export default function HeroText() {
  return (
    <motion.div
      className="absolute inset-0 z-10 flex flex-col justify-center items-center text-center pointer-events-none px-5"
      {...textAnimation}
    >
      <span className="text-xs uppercase tracking-widest mb-2 opacity-60">
        [BRAND AWARENESS]
      </span>

      {/* Desktop/Tablet */}
      <h1 className="hidden md:block text-[clamp(2.5rem,5vw+1rem,4.5rem)] font-black tracking-tight leading-tight">
        Você não vê
        <br />
        o design.
      </h1>

      {/* Mobile */}
      <h1 className="md:hidden text-[clamp(2.5rem,5vw+1rem,4.5rem)] font-black tracking-tight leading-tight">
        Você não
        <br />
        vê o
        <br />
        design.
      </h1>

      <h2 className="text-[clamp(1.5rem,3vw+0.5rem,2.5rem)] font-bold text-[#d9dade] mt-4">
        Mas ele vê você.
      </h2>

      <div className="mt-8 pointer-events-auto">
        <CTAButton href="/sobre">step inside </CTAButton>
      </div>
    </motion.div>
  );
}

```

```

```

GhostScene.tsx

```tsx
'use client';

import { Canvas } from '@react-three/fiber';
import { Suspense } from 'react';
import { Ghost } from './Ghost';
import { Atmosphere } from './Atmosphere';
import { Fireflies } from './Fireflies';

export default function GhostScene() {
  return (
    <Canvas
      className="absolute inset-0 z-20"
      gl={{ antialias: true, alpha: true }}
      camera={{ position: [0, 0, 20], fov: 75 }}
      role="presentation"
      aria-hidden="true"
    >
      <ambientLight color="#0a0a2e" intensity={0.08} />
      <directionalLight position={[ -8, 6, -4]} color="#4a90e2"
        intensity={1.8} />
      <directionalLight position={[ 8, -4, -6]} color="#50e3c2"
        intensity={1.26} />

      <Suspense fallback={null}>
        <Atmosphere />
        <Ghost />
        <Fireflies count={20} />
      </Suspense>
    </Canvas>
  );
}
```
```

```

🎬 4.3 – VÍDEO MANIFESTO

2.1 Objetivo

Apresentar um vídeo manifesto fullscreen com resumo poético do trabalho, posicionado logo após a Hero, sem animações de scroll-morphing.

Características:

- Seção independente e fullscreen
- Colado às paredes da página
- Aspect ratio 16:9 (`aspect-video`)
- Autoplay, loop, muted
- Controle de áudio visível

2.2 Layout

```
#### **Estrutura**
```

```
```tsx
<section className="video-manifesto">
 <div className="video-wrapper">
 <video />
 <div className="video-overlay" />
 <div className="video-text" />
 <button className="toggle-sound" />
 </div>
</section>
```

```

```
#### **Posicionamento**
```

****Desktop e Mobile:****

- Seção fullscreen logo após Hero
- `width: 100vw`
- `aspect-ratio: 16/9`
- Sem padding lateral (colado às paredes)

```
```css
.video-manifesto {
 width: 100vw;
 margin: 0;
 padding: 0;
}

```

```
.video-wrapper {
 width: 100%;
 aspect-ratio: 16/9;
 position: relative;
}
```

```

```
## 2.3 Comportamento do Vídeo**
```

Propriedades Base

```
```tsx
<video
 autoPlay
 loop
 muted
 playsInline
 preload="metadata"
 src={videoSrc}
 poster={posterSrc}
/>
```

```

```
#### **Controle de Áudio**
```

****Desktop e Mobile:****

- Botão de som sempre visível
- Tap/click = toggle mute
- Ao sair da seção → mutar automaticamente

```
```tsx
const [muted, setMuted] = useState(true);

// Observer para detectar saída da seção
useEffect(() => {
 const observer = new IntersectionObserver(
 ([entry]) => {
 if (!entry.isIntersecting) {
 setMuted(true);
 }
 },
 { threshold: 0.1 }
);

 if (sectionRef.current) {
 observer.observe(sectionRef.current);
 }

 return () => observer.disconnect();
}, []);
```

---

## **### \*\*2.4 Animação de Entrada\*\***

### **\*\*Simples fade-in (sem scroll-triggered morphing):\*\***

```
```javascript
// Framer Motion
initial: {
  opacity: 0,
  scale: 0.95,
  y: 20
}

animate: {
  opacity: 1,
  scale: 1,
  y: 0
}

transition: {
  duration: 0.6,
  ease: [0.22, 1, 0.36, 1]
}
```

```

```
2.5 Overlay e Metadados
```

```
Overlay Gradiente
```

```
```css
.video-overlay {
  background: radial-gradient(
    120% 120% at 70% 30%,
    rgba(0, 0, 0, 0) 0%,
    rgba(0, 0, 0, 0.55) 70%,
    rgba(0, 0, 0, 0.75) 100%
  );
  position: absolute;
  inset: 0;
  pointer-events: none;
}
```

```

```
Texto Sobreposto
```

```
```tsx


<p className="text-white/70 text-sm mb-1">Showreel 2025</p>
  <p className="text-white text-lg font-medium">
    Strategy • Branding • Motion
  </p>


```

```

---

```
2.6 Controle de Som – Design
```

```
```tsx
<button
  type="button"
  className="toggle-sound absolute top-4 right-4 w-10 h-10 rounded-full
  bg-black/50 backdrop-blur-sm text-white flex items-center justify-center
  hover:bg-black/70 transition-colors"
  onClick={() => setMuted(m => !m)}
  aria-label={muted ? 'Ativar som' : 'Desativar som'}
  aria-pressed={!muted}
>
  {muted ? (
    <svg className="w-5 h-5" fill="none" viewBox="0 0 24 24"
      stroke="currentColor">
      <path strokeLinecap="round" strokeLinejoin="round" strokeWidth={2}
        d="M5.586 15H4a1 1 0 01-1v-4a1 1 0 011.586l4.707-4.707C10.923
        3.663 12.4.109 12.5v14c0 .891-1.077 1.337-1.707.707L5.586 15z" />
      <path strokeLinecap="round" strokeLinejoin="round" strokeWidth={2}
        d="M17 14l2-2m0 0l2-2m-2 2l-2-2m2 2l2 2" />
    </svg>
  ) : (

```

```
<svg className="w-5 h-5" fill="none" viewBox="0 0 24 24"
      stroke="currentColor">
    <path strokeLinecap="round" strokeLinejoin="round" strokeWidth={2}
      d="M15.536 8.464a5 5 0 010 7.072m2.828-9.9a9 9 0 010 12.728M5.586
      15H4a1 1 0 01-1-1v-4a1 1 0 011-1h1.586l4.707-4.707C10.923 3.663 12
      4.109 12 5v14c0 .891-1.077 1.337-1.707.707L5.586 15z" />
</svg>
)
</button>
```

```

### ### **2.7 Responsividade**

#### #### **Desktop e Mobile (Comportamento Unificado)**

```
```css
/* Ambos os dispositivos */
.video-manifesto {
  width: 100vw;
  padding: 0;
  margin: 0;
}

.video-wrapper {
  aspect-ratio: 16/9;
  width: 100%;
}

/* Ajustes de texto em mobile */
@media (max-width: 767px) {
  .video-text {
    padding: 1rem;
  }

  .video-text p:first-child {
    font-size: 0.75rem;
  }

  .video-text p:last-child {
    font-size: 0.875rem;
  }
}
```

```

### ### **2.8 Otimização de Carregamento**

#### #### **Lazy Loading**

```
```tsx
const [shouldLoad, setShouldLoad] = useState(false);
const wrapperRef = useRef<HTMLDivElement>(null);
```

```

useEffect(() => {
  const observer = new IntersectionObserver(
    ([entry]) => {
      if (entry.isIntersecting) {
        setShouldLoad(true);
        observer.disconnect();
      }
    },
    { rootMargin: '200px' }
  );

  if (wrapperRef.current) {
    observer.observe(wrapperRef.current);
  }

  return () => observer.disconnect();
}, []);
```

```

#### #### **Qualidade Adaptativa**

```

```tsx
const [videoQuality, setVideoQuality] = useState<'hd' | 'sd'>('hd');

useEffect(() => {
  if ('connection' in navigator) {
    const conn = (navigator as any).connection;

    if (conn?.effectiveType === '4g' || conn?.effectiveType === '5g') {
      setVideoQuality('hd');
    } else {
      setVideoQuality('sd');
    }
  }
}, []);

const videoSrc = videoQuality === 'hd'
  ? src
  : src.replace('.mp4', '-720p.mp4');
```

```

---

#### ### **2.9 Acessibilidade**

##### #### **Checklist**

- Envolver vídeo com elemento semântico (`<section>`)
- Botão de som com `aria-label` e `aria-pressed`
- `playsInline` para evitar fullscreen indesejado
- Respeitar `prefers-reduced-motion`
- Contraste adequado no overlay (gradiente)

-  Descrição alternativa via `aria-label` no vídeo

```
```tsx
<video
  aria-label="Vídeo showreel demonstrando projetos de design gráfico"
  aria-describedby="video-description"
/>

<p id="video-description" className="sr-only">
  Vídeo de apresentação dos trabalhos em estratégia, branding e motion
  design
</p>
```
```

---

### ### \*\*2.10 Implementação Completa\*\*

```
'use client';

import { useEffect, useRef, useState } from 'react';
import { motion } from 'framer-motion';

interface VideoManifestoProps {
 src: string;
}

export function VideoManifesto({ src }: VideoManifestoProps) {
 const [muted, setMuted] = useState(true);
 const [shouldLoad, setShouldLoad] = useState(false);
 const [videoQuality, setVideoQuality] = useState<'hd' | 'sd'>('hd');

 const sectionRef = useRef<HTMLElement>(null);
 const wrapperRef = useRef<HTMLDivElement>(null);
 const videoRef = useRef<HTMLVideoElement>(null);

 // Lazy loading
 useEffect(() => {
 if (!wrapperRef.current) return;

 const observer = new IntersectionObserver(
 ([entry]) => {
 if (entry.isIntersecting) {
 setShouldLoad(true);
 observer.disconnect();
 }
 },
 { rootMargin: '200px' }
);

 observer.observe(wrapperRef.current);
 return () => observer.disconnect();
 }, []);
}
```

```
// Mutar ao sair da seção
useEffect(() => {
 if (!sectionRef.current) return;

 const observer = new IntersectionObserver(
 ([entry]) => {
 if (!entry.isIntersecting) {
 setMuted(true);
 }
 },
 { threshold: 0.1 }
);

 observer.observe(sectionRef.current);
 return () => observer.disconnect();
}, []);

// Detectar qualidade de conexão
useEffect(() => {
 if ('connection' in navigator) {
 const conn = (navigator as any).connection;
 if (conn?.effectiveType === '4g' || conn?.effectiveType === '5g') {
 setVideoQuality('hd');
 } else {
 setVideoQuality('sd');
 }
 }
}, []);

// Aplicar mute
useEffect(() => {
 if (!videoRef.current) return;
 videoRef.current.muted = muted;
}, [muted]);

const videoSrc = videoQuality === 'hd'
 ? src
 : src.replace('.mp4', '-720p.mp4');

const posterSrc = src.replace('.mp4', '-poster.jpg');

return (
 <motion.section
 ref={sectionRef}
 className="video-manifesto w-full"
 initial={{ opacity: 0, scale: 0.95, y: 20 }}
 whileInView={{ opacity: 1, scale: 1, y: 0 }}
 transition={{ duration: 0.6, ease: [0.22, 1, 0.36, 1] }}
 viewport={{ once: true, amount: 0.3 }}
 >
 <div ref={wrapperRef} className="video-wrapper relative w-full aspect-video">
 {shouldLoad ? (
 <>
```

```

<motion.video
 ref={videoRef}
 className="w-full h-full object-cover"
 src={videoSrc}
 poster={posterSrc}
 autoPlay
 loop
 muted={muted}
 playsInline
 preload="metadata"
 aria-label="Vídeo showreel demonstrando projetos de design
 gráfico"
/>

{/* Overlay */}
<div className="video-overlay absolute inset-0
pointer-events-none" />

{/* Metadados */}
<div className="video-text absolute bottom-0 left-0 w-full p-4
md:p-6">
 <p className="text-white/70 text-xs md:text-sm mb-1">Showreel
 2025</p>
 <p className="text-white text-sm md:text-lg font-medium">
 Strategy • Branding • Motion
 </p>
</div>

{/* Toggle som */}
<button
 type="button"
 className="toggle-sound absolute top-4 right-4 w-10 h-10
 rounded-full bg-black/50 backdrop-blur-sm text-white flex
 items-center justify-center hover:bg-black/70
 transition-colors focus-visible:outline-2
 focus-visible:outline-[#4fe6ff]
 focus-visible:outline-offset-2"
 onClick={() => setMuted(m => !m)}
 aria-label={muted ? 'Ativar som do vídeo' : 'Desativar som do
 vídeo'}
 aria-pressed={!muted}
>
 {muted ? '🔇' : '🔊'}
</button>
</>
) : (
// Placeholder
<div className="w-full h-full bg-gradient-to-br from-neutral-900
 to-neutral-800 animate-pulse" />
)
</div>
</motion.section>
);
}

```

```

2.11 Integração na Página

```
```tsx
// app/page.tsx
import Hero from './_components/Hero';
import { VideoManifesto } from './_components/VideoManifesto';

export default function HomePage() {
 return (
 <main>
 {/* Hero Section */}
 <Hero />

 {/* Vídeo Manifesto */}
 <VideoManifesto
 src="https://aymuvxysygrwoicsjgxj.supabase
 .co/storage/v1/object/public/project-videos/VIDEO-APRESENTACAO-PORT
 FOLIO.mp4"
 />

 {/* Outras seções */}
 </main>
);
}

```
```

```

---

### ### \*\*2.12 CSS Global\*\*

```
```css
/* globals.css */

/* Overlay de vídeo */
.video-overlay {
  background: radial-gradient(
    120% 120% at 70% 30%,
    rgba(0, 0, 0, 0) 0%,
    rgba(0, 0, 0, 0.55) 70%,
    rgba(0, 0, 0, 0.75) 100%
  );
}

/* Remover espaçamento padrão */
.video-manifesto {
  margin: 0;
  padding: 0;
}

/* Garantir que vídeo ocupe toda a largura */
.video-wrapper video {
```

```
display: block;
width: 100%;
height: 100%;
```

}

2.13 Checklist de Validação

Funcional:

- [] Vídeo fullscreen logo após Hero
- [] Aspect ratio 16:9 mantido em todas as telas
- [] Autoplay funciona (muted)
- [] Botão de som visível e funcional
- [] Vídeo muta ao sair da seção
- [] Lazy loading implementado
- [] Qualidade adaptativa baseada em conexão

Acessibilidade:

- [] Botão com `aria-label` e `aria-pressed`
- [] `playsInline` no mobile
- [] Descrição alternativa no vídeo
- [] Contraste adequado no overlay
- [] Foco visível no botão de som

Performance:

- [] `preload="metadata"`
- [] Poster estático carregado
- [] IntersectionObserver para lazy load
- [] Versões HD/SD disponíveis

4.4 Portfolio Showcase – Protótipo Interativo

Purpose

Apresentar as principais categorias de trabalho com **sofisticação editorial**, usando movimento, hierarquia tipográfica e interação progressiva para **guiar o usuário naturalmente** até áreas específicas do portfólio – replicando o ritmo, layout e comportamento da sessão equivalente na home do site de referência.

Layout & Estrutura

Desktop ($\geq 1024\text{px}$)

Estrutura Geral

- Headline centralizada:
 - **"portfólio showcase"**
 - "portfólio" em branco
 - "showcase" em `#0048ff`
 - Label flutuante contextual:
 - Texto: **[what we love working on]**
 - Cor: `#0048ff`
 - Posicionamento: absoluto, alinhado à esquerda, alinhado a esquerda e ao intem 'Brand & Campaigns' dentro da faixa
 - Três faixas interativas horizontais ['#8705f2'] (*accordion-style stripes*), com alinhamento alternado:
 1. **Brand & Campaigns** – alinhada à direita
 2. **Videos & Motions** – centralizada
 3. **Web Campaigns, Websites & Tech** – alinhada à esquerda
 - Quebra de linha após a vírgula
 - CTA centralizado abaixo das faixas:
 - **"let's build something great →"**
-

Estrutura de Cada Stripe

Cada faixa contém:

- **Thumbnail de vídeo/imagem**
 - Largura: `288px`
 - Aspect ratio: ~16:9
 - Bordas levemente arredondadas
 - Oculta por padrão
 - **Título da categoria**
 - Tipografia grande (2x1–5x1)
 - Peso médio
 - Font-family: `TT Norms Pro Normal`
 - **Ícone de ação**
 - Badge circular azul
 - Ícone de seta interna
-

Interações & Animações

Scroll Reveal (Desktop)

- Trigger: quando 30% da seção entra na viewport
- Animação:


```
``js
opacity: 0 → 1
translateY: 24px → 0
duration: 0.8s
easing: ease-out
stagger: 120ms entre faixas
````
```

- Durante a entrada, os títulos transitam para `#0057FF`, reforçando hierarquia visual.
-

```
Hover sobre a Stripe (Desktop)

1. Revelação da Thumbnail
```js
width: 0 → 288px
opacity: 0 → 1
duration: 700ms
easing: cubic-bezier(0.22, 1, 0.36, 1)
```

```

```
2. Ajuste de Espaçamento Interno
```js
gap: gap-7 → gap-10
duration: 300ms
```

```

```
3. Ícone de Seta
```js
rotation: -45deg → 0deg
duration: 500ms
```

```

> A interação é **progressiva e silenciosa**, sem sobreposição agressiva ou quebra de layout.

---

```
Click
- Navegação para `/portfolio`
- Categoria correspondente aplicada via filtro (slug).
```

## ## Responsividade & Adaptação de Conteúdo

### ### Mobile & Tablet (≤1023px)

```
Layout
- Cards verticais full-width
- Conteúdo texto alinhado a esquerda da página
- Ícone de Seta alinhado a direita da página
- Label flutuante removida
- CTA centralizado
```

```
Comportamento
- Sem hover
- Thumbnails ocultas ou estáticas
- Ícones de seta à direita
```

---

```
Categories & Assets
```

1. **Brand & Campaigns**
  - Slug: `brand-campaigns`
  - Thumbnail:  
`https://aymuvxysygrwoicsjgxj.supabase.co/storage/v1/object/public/project-images/Branding-Project.webp`
2. **Videos & Motions**
  - Slug: `videos-motions`
  - Thumbnail:  
`https://aymuvxysygrwoicsjgxj.supabase.co/storage/v1/object/public/project-images/webdesigner-2%202.gif`
3. **Web Campaigns, Websites & Tech**
  - Slug: `websites-webcampaigns-tech`
  - Thumbnail:  
`https://aymuvxysygrwoicsjgxj.supabase.co/storage/v1/object/public/project-images/WelcomeAd\_800x500px.webp`

#### #### CTA Button

```
Text: "let's build something great →"
Destination: `/#contact`
Estado, Propriedade, Valor / Classe Tailwind, Duração, Easing
Idle, Translação Y, translate-y-0, -, -
Hover, Translação Y, -translate-y-px (Levitação sutil), 200ms, ease-out
Hover, Background, bg-light-blue `#0048ff` (Iluminação), 300ms, default
(`translateX: 4px`)
Optional: Subtle looping animation on arrow in idle state (`translateX:
0 → 4px → 0`)
```

---

#### ## Resultado Esperado

- Experiência editorial fluida
- Movimento como reforço de significado
- Consistência total entre desktop e mobile

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## # \*\*4.5 Featured Projects

**Purpose:** Showcase curated, high-quality work examples in an editorial, magazine-style layout (Bento Grid).

#### #### Layout (Desktop)

Irregular grid resembling a magazine spread:

```



Card 1
(336×500)

Card 2
(840×500)

Card 3
(1176×600)

Card 4
(784×400)

CTA
(392×400)

...

Grid Implementation (Tailwind):

```
```javascript
// Row 1
<div className="md:col-span-5"><ProjectCard /></div>
<div className="md:col-span-7"><ProjectCard /></div>

// Row 2
<div className="md:col-span-12"><ProjectCard /></div>

// Row 3
<div className="md:col-span-8"><ProjectCard /></div>
<div className="md:col-span-4"><CTAProjectCard /></div>
````
```

Project Cards

Structure:

- **Image/Video:** Covers card, object-fit cover
- **Pills (tags):** Positioned absolute, top-right, semi-transparent background (`#E6EFEF` at 70% opacity), small text
- **Info Block (below image):**
 - Title (H3, medium weight)
 - Meta: Client • Year (`#6B7280`, small text)
 - Arrow icon in blue circle (translates right on hover)

Interaction (Desktop):

```
```javascript
// Hover on card
image: { scale: 1.03, translateY: -1 }
duration: 500ms

arrow: { translateX: 20px }
duration: 700ms ease-out

shadow: { shadow-xl shadow-blue-500/10 }
````
```

Scroll Reveal:

```
```javascript
container: { opacity: 0 → 1, y: 40px → 0 }
```

```
cards: { scale: 0.96 → 1, staggerChildren: 0.12 }
duration: 0.7s ease-out
```
```

Featured Projects Content

1. **Magic – devolvendo a magia ao rádio**

- Slug: `magic-radio-branding`
- Category: branding & campanha
- Client: Magic
- Year: 2023
- Image:
`<https://aymuvxysygrwoicsjgxj.supabase.co/storage/v1/object/public/project-images/Brand-Identity%20copy.webp>`

2. **Uma marca ousada e consistente**

- Slug: `branding-project-01`
- Category: branding
- Client: Cliente confidencial
- Year: 2022
- Image:
`<https://aymuvxysygrwoicsjgxj.supabase.co/storage/v1/object/public/project-images/Branding-Project.webp>`

3. **Key visual para campanha sazonal**

- Slug: `key-visual-campaign`
- Category: campanha
- Client: Cliente confidencial
- Year: 2021
- Image:
`<https://aymuvxysygrwoicsjgxj.supabase.co/storage/v1/object/public/project-images/Key-Visual.webp>`

4. **Experiência web em movimento**

- Slug: `webdesigner-motion`
- Category: web & motion
- Client: Cliente confidencial
- Year: 2023
- Image:
`<https://aymuvxysygrwoicsjgxj.supabase.co/storage/v1/object/public/project-images/webdesigner-2%202.gif>`

CTA Card

Content:

- Headline: "Like what you see?" – font normal – (on hover, text becomes `#0057FF`)
- Button: "view projects →" with arrow icon
- Background: `#040013` (on hover, text becomes `#0057FF`)

Interaction:

```
```javascript
// Hover
background: { #040013 }
text: { white → #0057FF }
```

```
arrow: { translateX: 4px }
duration: 300ms
```

**Destination:** `/portfolio`  
  
#### Layout (Mobile)  
  
- All cards stacked vertically  
- Full-width, heights adapted to content/aspect ratio  
- CTA card appears as last item
```

```
**Desktop (≥1024px)**
- Layout:
  - Irregular grid resembling a magazine spread (Bento Grid)
  - 4 project cards with varying sizes and positions
  - CTA card in bottom-right position
- Grid Implementation (Tailwind):
  ```jsx
 // Row 1
 <div className="md:col-span-5"> <ProjectCard /> </div>
 <div className="md:col-span-7"> <ProjectCard /> </div>

 // Row 2
 <div className="md:col-span-12"> <ProjectCard /> </div>

 // Row 3
 <div className="md:col-span-8"> <ProjectCard /> </div>
 <div className="md:col-span-4"> <CTAProjectCard /> </div>
  ```

- Project Cards:
  - Structure: Image/Video, Pills (tags), Info Block
  - Interaction: Hover effects on image, arrow, and shadow
  - Scroll Reveal: Container and cards with staggered animation

**Mobile & Tablet (≤1023px)**
- Layout:
  - All cards stacked vertically
  - Full-width, heights adapted to content/aspect ratio
  - CTA card appears as last item
- Specific Implementation Details:
  - Each project card takes 100% of the container width
  - Cards have consistent vertical spacing (32px)
  - Project images maintain aspect ratio but scale to fit width
  - Tags/pills are positioned at the top of the card
  - The CTA card is simplified to a full-width button with text "view projects →"
  - The grid layout is replaced with a simple vertical stack
  - Project titles and metadata are center-aligned
- Content Adaptation:
  - The irregular bento grid is replaced with a clean vertical list
  - Project cards have consistent height on mobile
```

- The CTA card no longer has a separate section but is integrated as a full-width button
- The hover effects are replaced with touch-friendly tap effects

**4.6 Clients/Brands

Purpose: Build credibility by displaying recognizable brands previously worked with.

Layout

Desktop & Mobile:

- Full-width blue bar: `bg-[#0048ff]`
- Centered headline: "marcas com as quais já trabalhei" (white, bold, 2x1)
- Grid of logos: Responsive grid (3–4 columns on mobile, 6+ on desktop)
- Logos: White (apply `filter: brightness(0) invert` to SVGs)

Interaction

Hover (Desktop):

```
```javascript
logo: { scale: 1.04, brightness: 1.1 }
duration: 300ms
```
```

Scroll Reveal:

```
```javascript
title: { opacity: 0 → 1, y: 16 → 0 }
logos: {
 staggerChildren: 0.03,
 each: { opacity: 0 → 1, y: 12 → 0, scale: 0.9 → 1 }
}
```
```

Client Logos (12 total)

- `client1.svg` through `client12.svg`
- Base URL:
`https://aymuvxysygrwoicsjgxj.supabase.co/storage/v1/object/public/client-logos/`

Accessibility

- Logos have descriptive `alt` text (e.g., "Logo da empresa X")
- Keyboard navigable (if logos link anywhere)
- Respect `prefers-reduced-motion` (disable entrance stagger)

****Desktop & Mobile****

- Layout:
 - Full-width blue bar: `bg-[#0048ff]`
 - Centered headline: "marcas com as quais já trabalhei"
 - Grid of logos: Responsive grid (3-4 columns on mobile, 6+ on desktop)
 - Logos: White (apply `filter: brightness(0) invert` to SVGs)
 - Interaction:
 - Hover (Desktop): logo scale and brightness increase
 - Scroll Reveal: title and logos with staggered animation
 - Mobile-Specific Details:
 - Grid changes to 2 columns on small mobile, 3 columns on larger mobile/tablet
 - Logos are scaled to 70% of their desktop size on mobile
 - Vertical spacing between logo rows is 24px on mobile
 - The headline is smaller (1.5rem vs 2rem on desktop)
 - Logo grid has 16px padding on all sides on mobile
 - The blue background extends full width with no horizontal container constraints
-

****4.7 Contact**

****Purpose:**** Provide clear contact information and enable message submission.

Layout (Desktop)

Two-column layout:

- **Left column:** Contact info + social media links
- **Right column:** Contact form

Layout (Mobile)

Single column, vertically stacked:

1. Headline + subheadline
2. Contact info
3. Contact form
4. Social media links

Content

****Headline:**** "contato"

****Subheadline:**** "Tem uma pergunta ou quer trabalhar junto?"

Contact Information

****Direct Channels:****

- **Phone:** `+55 (11) 98396-6838`
 - Icon: Phone
 - Link: `tel:+5511983966838`
- **Email (primary):** `danilo@portfoliodanilo.com`

- Icon: Envelope
- Link: `mailto:danielo@portfoliodanilo.com`
- **Email (secondary):** `dannovaisv@gmail.com`
- Icon: Envelope
- Link: `mailto:dannovaisv@gmail.com`

Interaction:

- Text color: `#111111`
- Hover: Underline + color change to `#0057FF`
- Icons match text color

Social Media & Portfolio:

- Icons only (no text labels)
- Platforms: Instagram, Facebook, LinkedIn, Portfolio site, Twitter
- Color: `#111111`, hover: `#0057FF` + `scale(1.1)`
- All open in new tab (`target="_blank"`, `rel="noopener noreferrer"`)

Links:

- Instagram: `https://instagram.com/danilo_novais`
- Facebook: `https://facebook.com/danilonovaisvilela`
- LinkedIn: `https://linkedin.com/in/danilonovais`
- Portfolio: `https://portfoliodanilo.com`
- Twitter: `https://twitter.com/danilo_novais`

Contact Form

Fields:

- Name (text input, required)
- Email (email input, required)
- Message (textarea, required)

Submit Button:

- Label: "Enviar Mensagem"
- Background: `#0048ff`
- Text: White
- Hover: Slight elevation (`translateY: -1px`), `scale(1.02)`
- Tap: `scale(0.98)`

Form Action:

- Method: POST
- Endpoint: `https://formsubmit.co/danilo@portfoliodanilo.com`

States:

- **Focus on input:** Border color `#0057FF`, shadow `ring-2 ring-blue-500`
- **Error:** Show validation message below field
- **Success:** Show success message, clear form
- **Loading:** Disable button, show spinner

Interactions & Animations

Scroll Reveal:

```
```javascript
section: { opacity: 0 → 1, y: 24 → 0 }
form fields: { staggerChildren: 60ms }
duration: 0.6s
```

```
```
**Form Interactions:**  
```javascript  
// Input focus
ring-2 ring-blue-500 ring-offset-2

// Button hover
{ scale: 1.02, y: -1 }

// Button tap
{ scale: 0.98 }
```

**Desktop (≥1024px)**  
- Layout:  
  - Two-column layout: Left column (contact info), Right column (contact form)  
- Content:  
  - Headline: "contato"  
  - Subheadline: "Tem uma pergunta ou quer trabalhar junto?"  
  - Contact Information: Direct channels (phone, emails), Social media  
  - Contact Form: Name, Email, Message fields, Submit button

**Mobile & Tablet (≤1023px)**  
- Layout:  
  - Single column, vertically stacked:  
    - Headline + subheadline  
    - Contact info  
    - Contact form  
    - Social media links  
- Specific Implementation Details:  
  - All elements are full-width with appropriate spacing  
  - Form fields have larger touch targets (minimum 48x48px)  
  - The contact info section has increased vertical spacing between items  
  - Social media icons are displayed in a single row at the bottom  
  - The form submit button is full-width with increased height  
  - The headline and subheadline are center-aligned  
  - The contact information is simplified to a vertical list  
- Content Adaptation:  
  - The two-column layout collapses to a single column  
  - Social media icons are reduced to just the icons (no text)  
  - Form fields have increased padding for touch interaction  
  - The "Enviar Mensagem" button has a minimum width of 100% on mobile
```

Accessibility

- All inputs have associated `<label>` elements
- Keyboard navigable
- Focus indicators (`focus-visible`)
- Error messages programmatically associated with fields
- Minimum touch target size: 48x48px (mobile)

**4.8 Footer

Purpose: Provide legal information, supplementary navigation, and social links while respecting the overall editorial aesthetic.

Desktop ($\geq 1024\text{px}$)

Layout:

- Fixed bar at bottom of viewport
- Persistent (always visible)
- Horizontal layout: Copyright (left) | Navigation + Social (right)
- Height: `48–64px`

Behavior:

- `position: fixed`, `bottom: 0`, `z-index: 10`
- Does not scroll away

Mobile & Tablet ($\leq 1023\text{px}$)

Layout:

- Static section in document flow (last element on page)
- Vertical stack: Copyright → Navigation → Social
- **Never fixed**
- **Never overlaps content**

Spacing:

- Generous vertical padding: `py-10`
- Spacing between blocks: `space-y-6`
- Minimum touch target: $48 \times 48\text{px}$

Content

Copyright:

- "© 2025 Danilo Novais Vilela – todos os direitos reservados"
- Color: White
- Small text

Navigation Links:

- Home → `#hero`
- Portfólio Showcase → `#portfolio-showcase`
- Sobre → `/sobre`
- Contato → `#contact`

Social Media:

- Same icons and links as Contact section
- White icons, hover: slight opacity reduction (desktop) or focus indicator (mobile)

Background

- Solid blue: `bg-[#0057FF]`

- Text: White

Interactions

****Desktop:****
```javascript  
// Hover on links  
opacity: 1 → 0.8  
underline animation  
duration: 200ms

// Hover on social icons  
scale: 1.05  
duration: 200ms  
```

****Mobile:****

- No hover dependencies
- Feedback only on `:active` / `:focus-visible`

****Desktop (≥1024px)****

- Layout:
 - Fixed bar at bottom of viewport
 - Persistent (always visible)
 - Horizontal layout: Copyright (left) | Navigation + Social (right)
 - Height: `48–64px`
- Behavior:
 - `position: fixed`, `bottom: 0`, `z-index: 10`
 - Does not scroll away

****Mobile & Tablet (≤1023px)****

- Layout:
 - Static section in document flow (last element on page)
 - Vertical stack: Copyright → Navigation → Social
 - Never fixed, never overlaps content
- Specific Implementation Details:
 - The footer is the last element on the page, not fixed to bottom
 - Content is center-aligned with generous vertical padding
 - Navigation links are displayed in a single row
 - Social media icons are displayed in a single row below navigation
 - Copyright text is smaller (0.875rem) on mobile
 - The blue background extends full width with no container constraints
 - Spacing between elements is increased (32px) for touch accessibility
- Content Adaptation:
 - The fixed position behavior is removed on mobile
 - The horizontal layout is converted to a vertical stack
 - The navigation and social links are consolidated into fewer rows
 - The height is variable based on content rather than fixed

Accessibility

- All links have `aria-label` where needed
- Keyboard navigable

- Logical tab order
- Contrast: White on `#0057FF` meets WCAG AA
- Touch targets meet minimum 48x48px

Non-Negotiables

- Footer is ****fixed only on desktop****
- Footer is ****not fixed on mobile****
- No competition with Hero, Manifesto, or CTAs
- Clean, unobtrusive design

**5. TECHNICAL IMPLEMENTATION

1. Visão Geral da Tecnologia (Tech Stack)

Frontend Core

- **Framework:** React 18+ (com Hooks)
- **Meta-framework:** Next.js 13+ (App Router)
- **Linguagem:** TypeScript (implícito pela stack moderna)

Estilização e UI

- **CSS:** Tailwind CSS (apenas classes utilitárias core)
- **Animações de Interface:** Framer Motion
- **3D / WebGL:** React Three Fiber + Three.js

Infraestrutura e Assets

- **Formulários:** FormSubmit.co
- **Assets:** Fontes self-hosted; Assets externos via Supabase Storage
- **Build/Deploy:** Vercel, Netlify ou Cloudflare Pages

2. Requisitos de Performance e Acessibilidade

2.1 Orçamento de Performance (Performance Budget)

- **Peso Inicial da Página:** < 2MB
- **Time to Interactive (TTI):** < 5s (em 3G)
- **First Contentful Paint (FCP):** < 2s
- **Cumulative Layout Shift (CLS):** < 0.1

2.2 Estratégias de Otimização

- **Imagens:** Formato WebP, lazy loading, `srcset` responsivo.
- **Vídeos:** Comprimidos, autoplay mudo, lazy load (abaixo da dobra).
- **Fontes:** Self-hosted, preloaded, *subsetting* se possível.
- **JavaScript:** Code splitting, imports dinâmicos para WebGL.
- **CSS:** Purge de classes Tailwind não utilizadas em produção.
- **WebGL:** Max DPR de 2, antialias desativado.

2.3 Padrões de Acessibilidade (WCAG 2.1 Level AA)

- **Contraste:** Mínimo 4.5:1 para texto normal.
 - **Navegação:** Totalmente operável via teclado (Focus Indicators visíveis).
 - **Semântica:** Uso correto de HTML semântico e atributos ARIA.
 - **Movimento:** Respeitar a preferência `prefers-reduced-motion`.
 - **Mobile:** Áreas de toque mínimas de 48x48px.
-

3. Especificação de Componentes Críticos

3.1 Botão CTA (Primary Call-to-Action)

Design Visual:

- **Formato:** Compósito (Pílula à esquerda + Círculo à direita).
- **Cor:** Azul Primário (`#0048ff`). Texto Branco.
- **Texto:** Uppercase, tracking médio, padding `px-6 py-3`.
- **Ícone:** Seta (→) centralizada no círculo.

Interações e Animações:

1. **Hover (Desktop):** O botão inteiro sobe 1px (`translateY(-1px)`).
2. **Seta (Opcional):** Desliza 4px para a direita no hover.
3. **Click (Mobile):** Efeito de compressão (`scale(0.98)`).
4. **Foco (Teclado):** Outline de 2px sólido cor `#4fe6ff` com offset de 4px.

Exemplo de Implementação (Framer Motion):

```

```tsx
import { motion } from 'framer-motion';
import { ArrowRight } from 'lucide-react';

export const CTAButton = ({ href, children, variant = 'primary' }) => {
 return (
 <motion.a
 href={href}
 className="inline-flex items-stretch rounded-full bg-[#000022]
 text-white group focus-visible:outline-2
 focus-visible:outline-[#4fe6ff]"
 whileHover={{ y: -1 }}
 whileTap={{ scale: 0.98 }}
 transition={{ duration: 0.2, ease: 'easeOut' }}
 >
 <span className="px-6 py-3 font-medium uppercase
 tracking-wide">{children}
 <motion.span
 className="flex items-center justify-center w-12 h-12 rounded-full"
 whileHover={{ x: 4 }}
 >
 <ArrowRight className="w-5 h-5" />
 </motion.span>
 </motion.a>
);
};
```

```

``` ### 3.2 Atmosfera "Ghost" (WebGL)

Propósito: Camada visual atmosférica na seção Hero (decorativo).
Regras Críticas:

- * Carregamento via **Dynamic Import** (apenas client-side).
- * Fallback para gradiente estático se falhar ou se `prefers-reduced-motion` estiver ativo.
- * Não deve controlar layout ou bloquear texto.

Arquitetura de Pastas Sugerida:

```
```text
components/
 -- canvas/
 | GhostCanvas.tsx
 | Ghost.tsx
 | Particles.tsx
 | Fireflies.tsx
 | postprocessing/
```

```

4. Estrutura de Conteúdo e Páginas

4.1 Inventário de Conteúdo

1. **Hero:** Manchete editorial, submanchete, CTA principal, Atmosfera WebGL.
2. **Portfolio Showcase:** Título, lista de categorias, labels flutuantes, CTA.
3. **Featured Projects:** Grid Bento, metadados dos projetos.
4. **Clients/Brands:** Grid de logotipos.
5. **Contact:** Formulário (2 colunas desktop, 1 mobile), info de contato, sociais.
6. **Footer:** Copyright 2025, navegação.

4.2 Comportamento Responsivo

- * **Header:**
- * Desktop: Efeito "Glass" fluido.
- * Mobile: Menu "Hambúrguer" com animação escalonada (staggered).

- * **Footer:**
- * Desktop: Fixo na base (se o design pedir reveal) ou estático.
- * Mobile: Sempre estático no fluxo do documento (nunca fixo).

5. Build, Deploy e Variáveis

Comando de Build: `pnpm run build`

Variáveis de Ambiente (`.env.local`):

```
```bash
NEXT_PUBLIC_GA_ID=UA-XXXXXXXXXX-X
NEXT_PUBLIC_SUPABASE_URL=
[https://aymuvxysygrwoicsjgxj.supabase.co](https://aymuvxysygrwoicsjgxj
.supabase.co)
NEXT_PUBLIC_SUPABASE_ANON_KEY=<anon_key>
````
```

Checklist Pré-Deployment:

- * [] Auditoria Lighthouse (Score > 90).
- * [] Teste em dispositivos móveis reais (iOS/Android).
- * [] Validação de envio de formulários.
- * [] Verificação de links externos (abrir em nova aba).
- * [] Teste de vídeos (autoplay mudo).
- * [] Teste de `prefers-reduced-motion`.

6. Checklist de Garantia de Qualidade (QA)

Visual

- * [] **Hero:** Texto legível sobre o WebGL.
- * [] **Manifesto:** Vídeo inicia pequeno e expande no scroll.
- * [] **Projetos:** Grid Bento proporcional no desktop, pilha vertical no mobile.
- * [] **Logos:** Grid adapta colunas (2-3 no mobile).

Funcionalidade

- * [] Links de navegação (âncoras e rotas) funcionais.
- * [] Formulário envia dados corretamente.
- * [] Ícones sociais abrem em novas abas.
- * [] Sem erros no console do navegador.
- * [] Sem scroll horizontal indesejado no mobile.

Performance & Acessibilidade

- * [] Carregamento < 3s em 3G.
- * [] Navegação completa via Tab (Teclado).
- * [] Screen Readers leem o conteúdo corretamente.
- * [] CLS < 0.1 (Layout estável).

```

