

## **Personal Portfolio Website**

**Role:** Designer & Developer

**Timeline:** April - June 2025

**Type:** Personal Project

### **Project Overview**

Interactive portfolio website designed specifically for recruiters to quickly understand my interests, skills, and experience. Focused on creating a scannable, readable interface without sacrificing depth of information, recognizing that recruiters often quickly scan portfolios due to high application volumes.

### **Phase 1: Research & Analysis**

While no formal user research was conducted, I analyzed existing portfolio examples to identify key design principles and best practices for developer portfolios.

#### **Key Insights**

- **Progressive Disclosure:** Essential for managing information density
- **Scannability:** Clear visual hierarchy and rapid information processing
- **Aesthetic Design:** Consistent design language and visual cohesion

### **Phase 2: Design & Iteration**

The design underwent significant iteration based on both personal reflection and community feedback.

#### **Major Design Decisions**

- **Background Animation:** Originally planned 3 separate animations, simplified to single marching squares algorithm for cohesive design
- **Project Cards:** 5+ iterations focused on readability and information hierarchy
- **Hero Section:** Redesigned for visual consistency with overall design language



### Community Feedback Integration

Gathered feedback through 2 sessions with Reddit and Discord community members, leading to key improvements:

- The image is a collage of project thumbnails for a portfolio, set against a dark background with faint, swirling patterns. The projects are arranged in a grid-like fashion, with some overlapping. The projects shown are: 1. 'social media wisdom': An LLM platform for personalized Instagram usage insights, featuring a screenshot of a web interface and a list of technologies: [HTML/CSS], [JavaScript], [Python], [Flask], [Ollama]. 2. 'ai-driven usability evaluations': Undergraduate research analyzing the effectiveness of LLMs for heuristic evaluations, featuring a screenshot of a research paper or report. 3. 'robotic wheelchair navigation': Development of a point-to-point navigation algorithm for a wheelchair in a CAD apartment, featuring a 3D isometric rendering of a room layout. 4. 'pomodoro study timer': A study timer application, featuring a screenshot of the timer interface with a 25:00 timer and buttons for 'Pomodoro', 'Long Break', and 'Short Break'. 5. 'social media wisdom': Another instance of the social media wisdom project, featuring a screenshot of a form or questionnaire. 6. 'ai-driven usability evaluations': Another instance of the ai-driven usability evaluations project, featuring a screenshot of a research paper or report. 7. 'robotic wheelchair navigation': Another instance of the robotic wheelchair navigation project, featuring a 3D isometric rendering of a room layout. 8. 'pomodoro study timer': Another instance of the pomodoro study timer project, featuring a screenshot of the timer interface. 9. 'social media wisdom': Another instance of the social media wisdom project, featuring a screenshot of a form or questionnaire. 10. 'ai-driven usability evaluations': Another instance of the ai-driven usability evaluations project, featuring a screenshot of a research paper or report. 11. 'robotic wheelchair navigation': Another instance of the robotic wheelchair navigation project, featuring a 3D isometric rendering of a room layout. 12. 'pomodoro study timer': Another instance of the pomodoro study timer project, featuring a screenshot of the timer interface. At the bottom of the collage, there is a section titled 'projects' with a filter bar containing buttons for 'all', 'development', 'design', and 'both'. Below the filter bar, it says 'Showing 7 projects'. There are three larger project previews in this section: 1. 'pomodoro study timer': A full-stack study timer application with pomodoro work/break intervals, built with React and deployed on Azure. 2. 'personal website': An interactive portfolio website featuring custom marching squares background animation, responsive design, and smooth section transitions. 3. 'GreenView': A complete UX design for an educational garden, featuring high-fidelity prototypes and a comprehensive design system. To the right of these previews is a small profile card for 'Ethan Luchs' with a photo and a bio. Below the profile card is a screenshot of a 'Snipping Tool' window showing a screenshot of the portfolio website, with text indicating 'Screenshot copied to clipboard' and 'Automatically saved to screenshots folder.' There is also a 'Markup and share' button.

The image displays three mobile application mockups side-by-side, each with a dark theme and a purple-to-blue gradient background.

- Left Mockup (pomodoro study timer):** Features a large digital clock showing '25:00'. Below the clock are buttons for 'Pomodoro', 'Long Break', and 'Short Break'. A 'Live' badge is in the bottom right. The description below states it's a full-stack study timer with Pomodoro intervals, built with React and deployed on Azure. It lists key features: Pomodoro timer intervals (25/5/15 min), session progress tracking, responsive design, and Azure Static Web Apps deployment. At the bottom, it shows '100% RESPONSIVE', 'React FRAMEWORK', and 'Live STATUS' with associated technology tags (React, JavaScript, HTML/CSS, Figma, Azure) and buttons for 'Live Demo' and 'GitHub'.
- Middle Mockup (personal website):** Shows a portfolio website layout with a grid of project cards. A 'Live' badge is in the bottom right. The description describes an interactive portfolio with custom marching squares animation, responsive design, and smooth section transitions, designed in Figma and built with vanilla JavaScript and anime.js. Key features include custom marching squares animation, smooth section color transitions, an interactive skills showcase, and mobile-responsive design. The bottom section shows '3 SECTIONS', '7 PROJECTS', and '15fps ANIMATION' with technology tags (HTML/CSS, JavaScript, anime.js, Figma, Canvas API) and buttons for 'You're Here!' and 'GitHub'.
- Right Mockup (GreenView):** Displays a garden app interface with various view options like 'Save to Journal', 'Green View', 'Harmony Spruce', and 'Weatherlog Info'. A 'Complete' badge is in the bottom right. The description outlines a complete UX development lifecycle for an educational garden app, from user research to high-fidelity prototyping and usability testing. It lists the UX process: user interviews & persona development, information architecture design, interactive Figma prototype, and usability testing & iteration. The bottom section shows '3 USER TESTS', '6 SCREENS', and '0% ERROR RATE' with technology tags (Figma, Prototyping, User Research, Wireframing, Heuristic Evaluation) and buttons for 'View Prototype' and 'Download Report'.

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### Phase 3: Technical Implementation

Developed custom solutions for performance and responsive design challenges using Figma, VS Code, anime.js, HTML/CSS, and JavaScript.

#### Technical Challenges & Solutions

- **Performance Optimization:** Marching squares animation optimized for lower-end devices, reducing from 30 fps to 10 fps with decreased resolution
- **Section Transitions:** Custom color-shifting system using HTML data attributes (hex codes) and JavaScript to indicate section changes
- **Responsive Design:** Implemented scalable CSS with media queries (@media min-width: 2560px) for devices ranging from mobile to 4K displays
- **Navigation Evolution:** Replaced problematic menu button with color-coded navigation dots based on user feedback

#### Key Technical Features

- Custom marching squares background animation (AI-implemented algorithm)
- Dynamic color transitions between sections
- Responsive design supporting multiple screen sizes
- Interactive project cards with overlay system

### Phase 4: Testing & Refinement

Informal user testing revealed navigation and scaling issues, leading to final refinements.

#### Key Changes

- Increased contrast of buttons in default states
- Progressive disclosure of hybrid UX/Development projects
- Increased contrast of text in about me section

#### Metrics

- **Iterations:** 5+ project card redesigns
- **Performance:** Optimized from 30fps to 10fps for broader device compatibility
- **Feedback Sessions:** 2 community feedback rounds
- **Responsive Support:** Mobile to 4K+ displays

#### Reflection

This project reinforced the importance of iteration and community feedback in design. The biggest challenge was balancing visual appeal with performance across different devices. The custom marching squares animation and section-based color transitions create a unique, cohesive experience while maintaining the scannability crucial for recruiter review. The progressive disclosure approach successfully manages information density while providing depth for interested viewers.