Assignment 2 - Vibe Coding

Project Context

I have long planned to establish an AI development company in my hometown and already secured domain name for this venture. This assignment provided the perfect opportunity to transform that vision into tangible web pages using vibe coding, allowing me to create functional website prototypes without extensive manual coding.

Value-Chain Impact

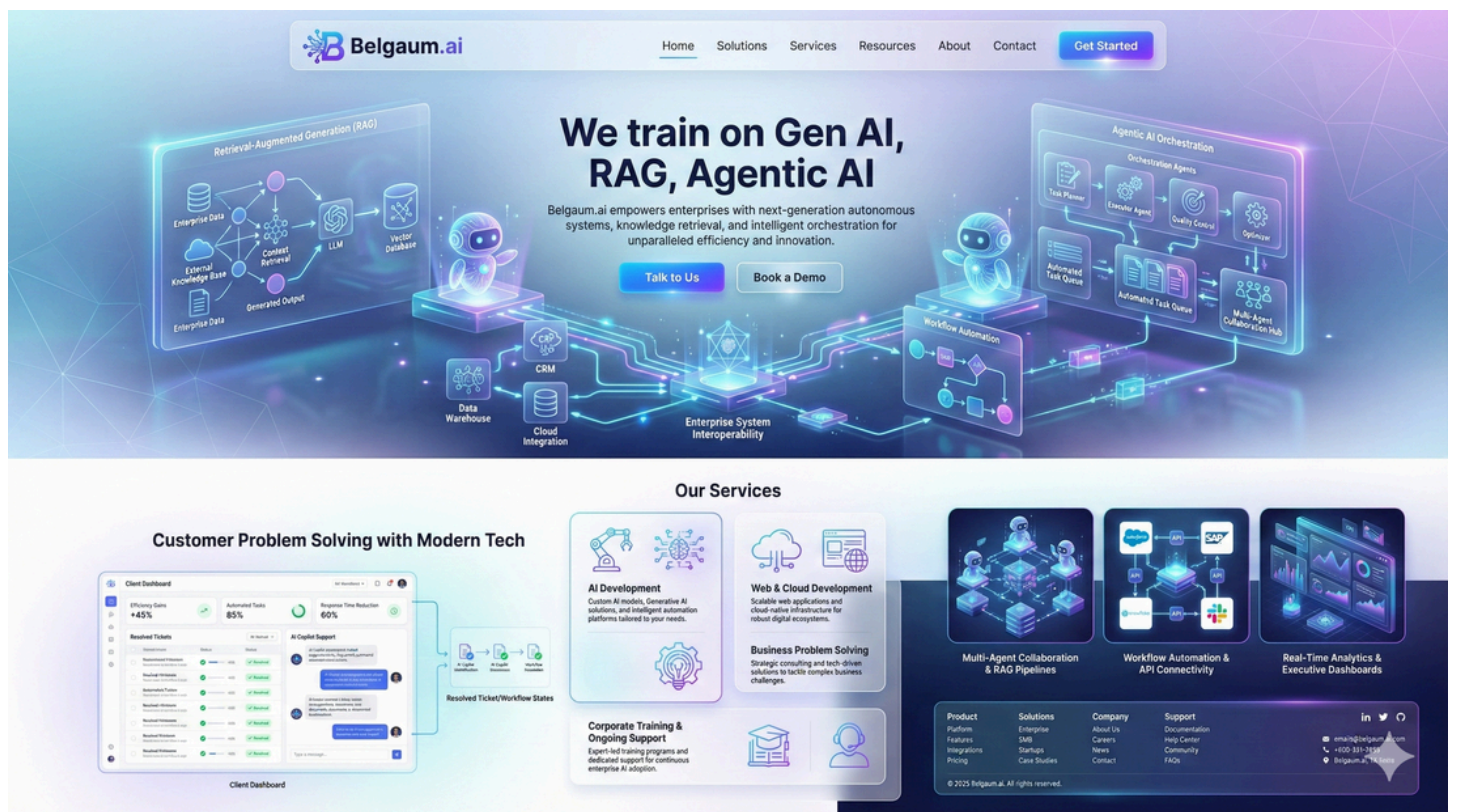For my planned AI development company, vibe coding directly impacts multiple points in the value chain:

- **Client engagement**: Rapidly prototype client websites during initial consultations, demonstrating concepts in real-time rather than waiting days for mockups
- **Service delivery**: Accelerate project timelines by using vibe coding for standard web components, allowing our team to focus on complex, high-value custom features
- **Cost efficiency**: Reduce development costs for basic implementations, making our services accessible to small businesses and startups in my hometown
- **Scalability**: Enable faster onboarding of junior developers who can contribute productively while learning traditional coding alongside AI-assisted methods

This hands-on experience confirmed that vibe coding is not just a learning tool but a legitimate business asset that can differentiate my company in the local market by offering faster turnaround times and more competitive pricing.

Prompt Design and Justification

Tool Selection

I selected **Google Nano Banana** (Gemini's AI image generator) for creating website mockups because it offers high-quality image generation with Imagen 4 technology, capable of producing professional-looking web interface designs.

HTML Code Generation Prompts

After generating satisfactory mockups, my prompts for HTML code generation were deliberately straightforward. For HTML implementation, I used **Google Canvas**, which provides real-time code preview capabilities and allows iterative refinement through natural language conversation.

website: https://belgaum.ai

Html file attached seprately

Below is the prompt used to create the html:

Generate a complete, modern, futuristic enterprise AI startup website for Belgaum.ai with three separate production-ready files:

The website must look premium, hyper-modern, and enterprise-grade, using advanced UI elements and animations representative of a cutting-edge AI orchestration company.

HTML Requirements (index.html)

Use clean, semantic HTML5 with proper sections: <header>, <nav>, <main>, <section>, <footer>.

Include:

Header

Brand logo text: Belgaum.ai

Sticky navigation menu:

AI Development

Web Development

Cloud Development

Business Problem Solving

Corporate Training

Contact

CTA button: Get Started

Hero Section

Main headline: Enterprise AI Orchestration & Development Solutions

Subheadline:

We train and build on Gen AI, RAG, and Agentic AI for real-world business transformation.

Two CTA buttons: Talk to an Expert, Explore Solutions

Optional animated tech or hologram background container

Services Section

Five service cards with icon placeholders, title, and short description:

AI Development

Web Development

Cloud Development

Business Problem Solving

Corporate Training

Features Section

Showcase enterprise AI capabilities such as:

Agentic AI

RAG Systems

Knowledge Graphs

Vector Databases

Workflow Automation

API Connectivity

Multi-agent Collaboration

AI Copilots

Real-time Dashboards

Cloud Integrations

Enterprise Interoperability

Use grid or card layout.

About Section

Title: Modern Tech Solutions for Enterprise Challenges

1–2 paragraphs describing Belgaum.ai's mission, enterprise capabilities, and AI orchestration focus.

Footer

Brand name and description

Quick links (Services, About, Resources, Careers)

Contact placeholder

Social media icon placeholders

Copyright

CSS Requirements (style.css)

Design the site using a premium enterprise SaaS visual identity.

Color Palette

Deep navy/dark blue: #0A1628

Royal blue: #1E3A8A

Cyber white tones: #FFFFFF, #F8FAFC

Neon highlight accents: #00D9FF, #8B5CF6, #10B981

Gradients: blue → purple, cyan → blue

Visual Design

Glassmorphism components (backdrop-filter: blur(…))

Gradient borders, neon glow accents

Large hero typography with gradient text

Transparent cards with floating animation

Smooth hover transitions on buttons and cards

Sticky transparent navigation bar with glass effect after scroll

Futuristic geometric/dot-grid backgrounds

Layout & Responsiveness

Mobile-first

Fluid grid layout

Responsive typography

Media queries for mobile, tablet, desktop

Animations

Floating holographic panels

Section fade-in using scroll triggers

Neon glow pulses

Smooth transitions

Keyframe floating elements

Best Practices

Use CSS variables for color and spacing

BEM-style class naming

Clean, structured, well-documented CSS

JavaScript Requirements (script.js)

Add modern, lightweight interaction and animation logic:

Smooth scrolling for internal navigation links

Scroll-triggered fade-in animations using Intersection Observer

Sticky navbar background color change on scroll

Mobile hamburger menu open/close

Parallax movement or scrolling in the hero section

Optional particle/dot-network animation (AI data nodes) in canvas

Hover tilt/glow effects for service cards

Typing effect for hero headline

Basic form validation for contact fields

Keep JS modular and well commented.

Design & Branding Requirements

Fully futuristic, premium enterprise AI aesthetic

Isometric / holographic feel using gradients and shadows

No stock photos of people

Use abstract AI visuals, geometric patterns, network-node aesthetics

Must feel trustworthy for enterprise clients

Professional spacing and typography hierarchy

Technical & Quality Standards

Clean, readable, production-quality code

SEO-friendly semantic HTML

ARIA attributes for accessibility

Fast load performance (no heavy libraries unless necessary)

Cross-browser compatible

Organized folder structure

No frameworks required (pure HTML, CSS, JS)

file must be fully functional and integrate seamlessly to build a modern enterprise AI startup website for Belgaum.ai.