



PROJECT PRESENTATION

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PROJECT OVERVIEW

- A full-stack portfolio website with a functional contact form
- Frontend: React + Vite with responsive design
- Backend: Node.js/Express API with MongoDB integration
- Live deployment on Render (backend) and Vercel (frontend)

MOTIVATIONS

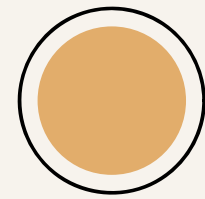
1. Showcase my web development skills

2. Demonstrate full-stack capabilities

3. Create a professional online presence

4. Implement real backend functionality

TECHNICAL ARCHITECTURE

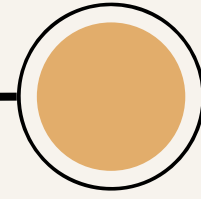


FRONTEND

React → Components, Hooks

Vite → Fast builds, HMR

CSS Vars → Theme system

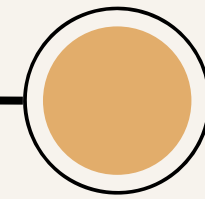


BACKEND

Express → REST API, CORS

MongoDB → Data storage

Render → Hosting, SSL

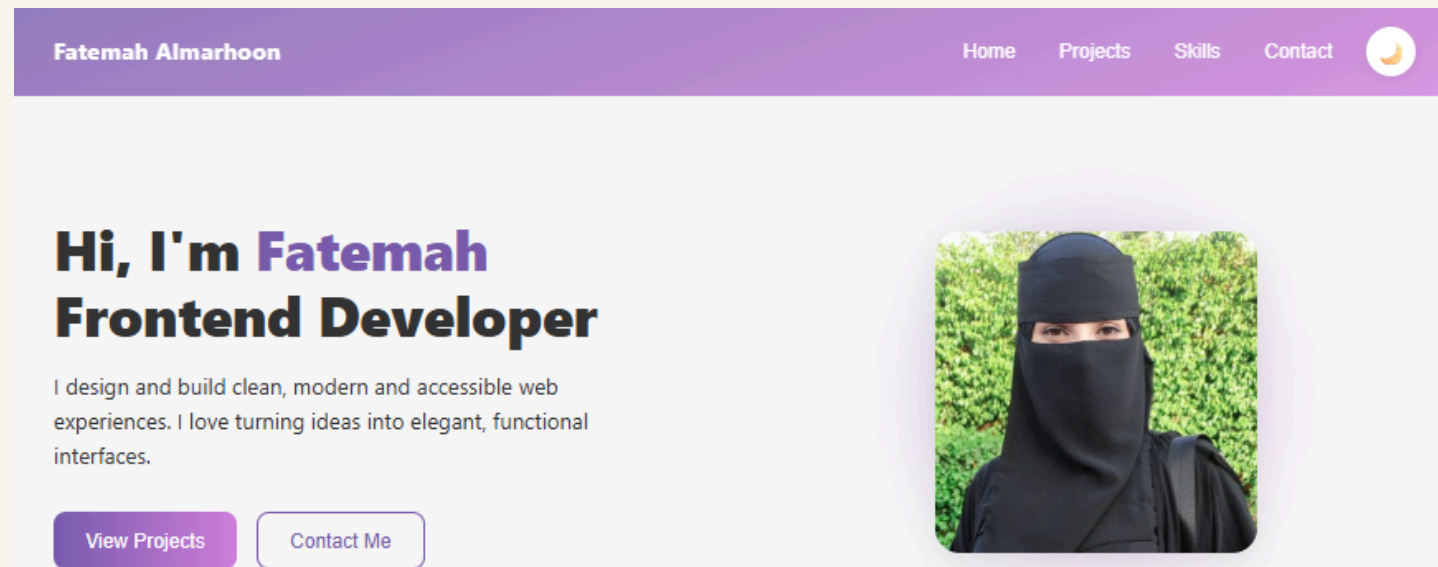


DEPLOYMENT

Vercel → Frontend

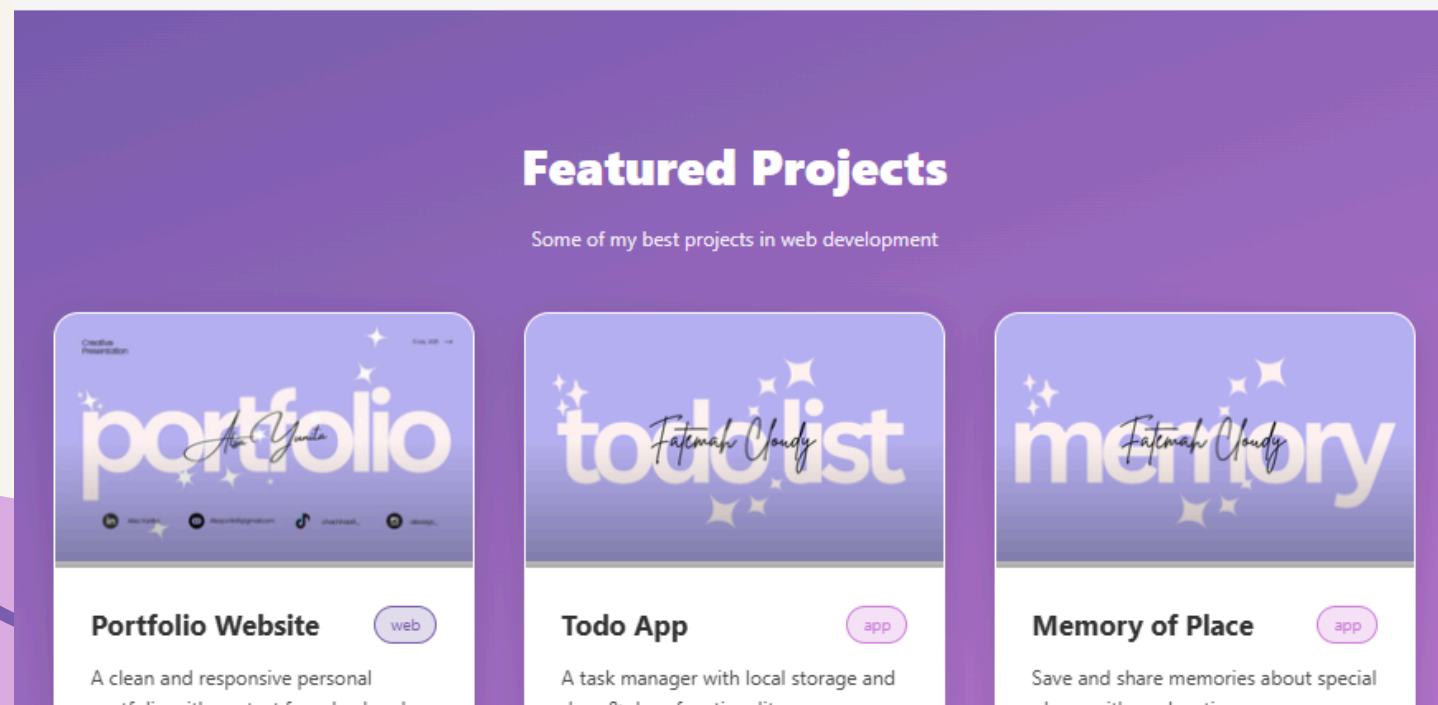
Render → Backend

TECHNICAL DEEP DIVE



```
// Initialize theme from localStorage or system preference
useEffect(() => {
  const savedTheme = localStorage.getItem('theme');
  const systemPrefersDark = window.matchMedia('(prefers-color-scheme: dark)').matches;

  if (savedTheme) {
    setTheme(savedTheme);
  } else if (systemPrefersDark) {
    setTheme('dark');
  }
}, []);
```



```
const backendUrl = import.meta.env.VITE_BACKEND_URL || 'http://localhost:5000';

const response = await fetch(`${backendUrl}/api/contact`, {
  method: 'POST',
  headers: { 'Content-Type': 'application/json' },
  body: JSON.stringify(formData),
});

const result = await response.json();

if (result.success) {
  alert('Message sent! Thank you for reaching out.');
```

CHALLENGES

1. CROSS-ORIGIN COMMUNICATION

- Problem: Frontend/backend on different domains
- Solution: CORS configuration with credentials

2. THEME PERSISTENCE

- Problem: Theme reset on page refresh
- Solution: localStorage + useEffect synchronization

3. DEPLOYMENT PIPELINE

- Problem: Managing separate frontend/backend deploys
- Solution: Environment variables and automated CI/CD



THANK
YOU