# DARSHAN GYAWALI

## Full-Stack Software Engineer

darshangyawali44@gmail.com | +977 9869244510 | Imadol, Lalitpur, Nepal

darshangyawali.com.np | github.com/Curious-duck-cmd

## PROFESSIONAL SUMMARY

Results-driven Full-Stack Software Engineer with hands-on experience building modern, production-ready web applications using React, Supabase, and cloud technologies. Proven track record of developing **20+ interconnected features** including real-time applications, interactive games, cloud storage systems, and content management platforms. Strong foundation in computer engineering with expertise in frontend development, backend architecture, database design, and API integration. Demonstrated ability to architect scalable solutions with clean code, optimal performance, and engaging user experiences.

√ **2,500+ lines of production code**

√ **95+ Lighthouse performance score**

√ **5 complete games with 60 FPS**

√ **100% mobile responsive design**

## TECHNICAL SKILLS

**Frontend Development**

React.js 18, JavaScript (ES6+), HTML5, CSS3, React Router, React Hooks, CSS Grid/Flexbox, Canvas API, CSS Animations

**Backend & Database**

Supabase, PostgreSQL, RESTful APIs, Realtime API, JWT Authentication, Row-Level Security (RLS), Cloud Storage

**Programming Languages**

JavaScript, C, C++, SQL

**Tools & Technologies**

Git/GitHub, VS Code, Vite, npm, Chrome DevTools, Figma, Postman

**Game Development**

Canvas API, 2D Rendering, Collision Detection, Physics Simulation, AI Pathfinding

**Core Competencies**

Full-Stack Development, UI/UX Design, Real-Time Systems, State Management, Performance Optimization

## KEY PROJECTS

**Comprehensive Portfolio Website (20+ Features)**                                      LIVE

*React, Supabase, Canvas API, PostgreSQL, CSS3, Vite | darshangyawali.com.np*

- Architected full-featured portfolio with 20+ interconnected components and **2,500+ lines of code**
- Built real-time chat system with WebSocket, achieving **100% message delivery** and sub-second latency
- Developed 5 complete games (Tetris, Snake, Pong, Slots, Roulette) with **60 FPS rendering**
- Implemented cloud gallery with Supabase storage, reducing load times by **40%**
- Created admin CMS with role-based access control, JWT authentication, and PostgreSQL RLS policies
- Achieved **95+ Lighthouse score** through code splitting and performance optimization

**Real-Time Chat Application**                                                          LIVE

*React, Supabase Realtime, PostgreSQL*

- Developed full-stack messaging platform with user authentication and secure session management
- Implemented live message synchronization using WebSocket with sub-second latency
- Built persistent chat history with optimized PostgreSQL queries
- Created responsive layout with mobile-optimized touch interface

### Game Development Suite (5 Complete Games)                                        **LIVE**

*Canvas API, React, Game Algorithms*

- Created **Tetris** with rotation matrices, collision detection, and progressive difficulty system
- Built **Snake** with grid-based movement, self-collision detection, and body growth mechanics
- Developed **Pong** with AI opponent using predictive movement and realistic ball physics
- Designed **Slot Machine** with weighted RNG, spinning animations, and 50x jackpot payouts
- Implemented **Roulette** with complete wheel (0-36), betting system, and spin history
- Achieved 60 FPS rendering and created dual control systems (keyboard + touch)

### Cloud Image Gallery & Blog CMS                                                   **LIVE**

*Supabase Storage, React, PostgreSQL, CRUD Operations*

- Engineered secure cloud gallery with role-based access control and RLS policies
- Built full-screen lightbox viewer with keyboard navigation and lazy loading (65% faster)
- Developed blog CMS with admin dashboard, CRUD operations, and protected routes
- Implemented real-time database synchronization for instant content updates

### F1 Data Integration System (Easter Egg)                                          **LIVE**

*Ergast F1 API, React Hooks, Date Calculations*

- Developed hidden feature with Konami code detection and unlock animations
- Integrated real-time F1 API with driver standings, constructor tables, and 24-race calendar
- Built live countdown timer with precise date calculations updating every second
- Implemented 5-minute caching strategy reducing API calls by **80%** with fallback system

## TECHNICAL ACCOMPLISHMENTS

### Performance Optimization

- Reduced page load times by 45% through code splitting
- Achieved 60 FPS in all games using requestAnimationFrame
- Implemented API caching reducing calls by 80%
- Optimized images decreasing load time by 40%

### Security & Code Quality

- Role-based access control with JWT authentication
- PostgreSQL Row Level Security (RLS) policies
- Input validation preventing injection attacks
- Reusable components reducing duplication by 60%

## PROFESSIONAL EXPERIENCE

### Freelance Full-Stack Developer                                                   2023 - Present

Self-Employed

- Architected and deployed 20+ production features with modern React and Supabase stack
- Integrated third-party APIs (Ergast F1, Goodreads) with error handling and caching
- Optimized application performance achieving 95+ Lighthouse scores across all pages
- Implemented comprehensive security with JWT authentication and PostgreSQL RLS policies
- Wrote 2,500+ lines of clean, maintainable, well-documented production code

## EDUCATION

### Bachelor of Computer Engineering                                                 2021 - Present

Kathford International College, Nepal (Affiliated with Tribhuvan University)

**Relevant Coursework:** Data Structures & Algorithms, Database Management Systems, Web Technologies, Software Engineering, Logic Design, Object-Oriented Programming, Computer Networks

### +2 Science (High School)                                                         2020 - 2021

Milestone International College, Nepal

**Major:** Physics, Chemistry, Mathematics

## ADDITIONAL INFORMATION

| | | | |
|---|---|---|---|
| **Languages:** | English (Fluent), Nepali (Native) | **Interests:** | Game Development, UI/UX Design, Formula 1 |
| **Availability:** | Open to full-time opportunities | | |