GasGuard – Real-time Web3 Security Dashboard

# 🚀 Project Vision

GasGuard is a futuristic Web3 dashboard that safeguards users by monitoring gas fees, token approvals, and scam alerts in real time—empowering secure DeFi interactions across the EVM ecosystem.

# 🧠 Description

GasGuard is a minimal, high-performance Web3 security dashboard that helps users monitor, secure, and optimize their on-chain activity. It offers:  
- 🚨 Real-time scam/phishing alerts  
- ⛽ Live gas fee tracking across major EVM networks  
- 🧾 Token approval tracker to detect dangerous unlimited permissions  
- 📈 Market overview with prices and trends  
- ✅ Integration with OKX DEX APIs for DeFi asset visibility  
- 🔐 Private by design—runs entirely on the client side without collecting user data

# 🧪 Features

- Framer Motion & Tailwind CSS for sleek, responsive UI  
- Next.js + TypeScript frontend  
- Node.js (Express) backend (lightweight for slower machines)  
- Integrated with OKX DEX API  
- Real-time alerts from wallet watch services  
- Wallet connect via MetaMask

# 🔧 Tech Stack

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| --- | --- |
| Layer | Tools / Frameworks |
| Frontend | Next.js, Tailwind CSS, TypeScript, Framer Motion |
| Backend | Node.js (Express) |
| APIs | OKX DEX API, Ethers.js, Web3.js |
| Hosting | Vercel (Frontend), Render/Glitch/Node locally |
| UI | Shadcn/UI, Heroicons |
| Wallet | MetaMask (WalletConnect ready) |

# 🛡️ Use of OKX DEX APIs

- Fetched token market data  
- Detected real-time token price fluctuations  
- Displayed asset approval status from OKX-based DeFi pools

# 🧱 L1s, L2s, Appchains, and Ecosystems

- Layer-1s (L1s): Ethereum, BNB Chain  
- Layer-2s (L2s): Optimism, Arbitrum (future support)  
- Appchains: –  
- Other Open Source Ecosystems: DeFi, Security Tooling, Wallet Monitoring

# 👨‍💻 Team

• Snklp – Team Lead / Full Stack Developer

• Aniket Rajak – Backend & API Integration

# 📎 Project Assets

- Logo: Attached  
- Frontend: Complete in Next.js + Tailwind + TypeScript  
- Backend: Lightweight Node.js server  
- Code Repository: https://github.com/snklp04/GasGuard  
- Demo Video: https://youtu.be/hh5EZY2Jax8

# 📜 How to Run Locally

1. Clone the repo  
2. Run `npm install` for both frontend and backend  
3. Frontend: `npm run dev`  
4. Backend: `npm start`  
5. Connect MetaMask and start tracking wallet security

# 🔐 Security Considerations

- No user data stored or shared  
- No backend database used — pure ephemeral processing  
- Trusted Web3 providers only (Alchemy, OKX APIs)