

MADHAV SEMWAL

Full-Stack Developer | GenAI & Backend Enthusiast

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Current Focus: Building high-performance microservices with Go & exploring Autonomous AI Agents using Python.

SUMMARY

Motivated Full-Stack Developer specializing in React, Next.js, and Node.js, with an increasing focus on Go (Golang) for high-performance backend systems. Experienced in building scalable web architectures, RESTful APIs, and real-time communication tools. Passionate about Generative AI integrations, including prompt engineering and intelligent UI workflows to automate complex tasks.

CORE COMPETENCIES

- **Languages:** Go (Golang), JavaScript (ES6+), TypeScript, Python
- **Frontend:** React, Next.js, Redux Toolkit, Tailwind, Shadcn
- **Databases:** PostgreSQL, MongoDB, Redis
- **Cloud/DevOps:** AWS (S3, EC2), Docker, Git, CI/CD pipelines

BACKEND & SECURITY

- **Frameworks:** Node.js, Express.js, Gin/Echo (Go)
- **Security:** Advanced Session Handling, CORS
- **Custom Auth:** AuthSphere (Custom Auth Service)
- **Architecture:** RESTful APIs, Plug-and-Play Modules

SELECTED PROJECTS

Syncra • Real-Time Peer Messaging Engine

[Go](#), [WebSockets](#), [PostgreSQL](#)

- Developed a lightweight real-time messaging engine using WebSockets to enable instant communication between users without page refresh.
- Implemented dynamic room-based messaging where the backend pairs users and manages direct message channels efficiently.
- Leveraged Go's concurrency model with Goroutines to handle multiple socket connections simultaneously with minimal latency.
- Designed local message persistence within the Syncra folder while integrating PostgreSQL for user management and system metadata.

AuthSphere • OAuth-Based Authentication Service

[JavaScript](#), [Node.js](#), [Express](#), [OAuth 2.0](#), [PKCE](#)

- Built a centralized authentication service implementing OAuth 2.0 with PKCE to enable secure login flows.
- Designed the system as a plug-and-play authentication hub for seamless identity and session management.
- Implemented robust CORS policies and secure API communication supporting multiple frontend clients.
- Focused on developer-friendly architecture and extensibility for integration across modern web ecosystems.

NexChat • Real-Time Messaging Platform

[React](#), [Node.js](#), [Express](#), [MongoDB](#), [Socket.io](#)

- Developed a real-time messaging platform enabling instant chat operations utilizing WebSockets with Socket.io.
- Implemented secure user authentication and session management using JWT for profiles.
- Designed a scalable full-stack architecture mapping React/Next.js frontend with Node.js + Express backend.
- Integrated MongoDB/PostgreSQL for tracking robust chat history effectively.

Discussly • Community Discussion Platform

[React](#), [Node.js](#), [Express](#), [MongoDB](#)

- Developed a full-stack community discussion platform where users can create posts, join communities, and interact through comments.
- Built responsive UI components using React with state management and smooth animations for an interactive user experience.
- Designed RESTful backend APIs with Node.js and Express and integrated MongoDB for efficient storage of users, posts, and community data.

Generative AI • Intelligent API Experiments

[Node.js](#), [Gemini API](#)

- Built intelligent prototypes tapping OpenAI and Gemini APIs orchestrating dynamic context-aware results.
- Pioneered intelligent UI workflows intended to automate heavy tasks relying entirely on natural prompts.

EXPERIENCE

Web Developer (Freelance / Remote)

2023 - Present

- Designed and launched fully-scaled e-commerce workflows delivering strong SEO conversion scores.
- Developed tailored product catalogs wrapping strongly protected contact operations globally.

EDUCATION

B.E. in Computer Science (Ongoing)

Expected Graduation: 2027

Savitribai Phule Pune University, Pune