

# MAHDI MAMASHLI

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## SUMMARY

Backend developer with experienced in event-driven architecture and framework design. Creator of Gland framework with broker-based messaging achieving protocol-agnostic communication. background in DSA, and technical documentation.

## TECHNICAL SKILLS

**Languages:** TypeScript, JavaScript, Python, Bash, LaTeX  
**Backend:** Node.js, Bun, Express, NestJS, event-driven patterns, WebSocket, pub/sub  
**Databases:** PostgreSQL, Redis, MongoDB  
**Architecture:** Event brokers, dependency injection, modular design, SOLID principles, GoF design patterns  
**Testing:** Unit, Integration, E2E, Smoke, Stress testing  
**DevOps:** Docker, CI/CD pipelines  
**Documentation:** Technical writing, API documentation, architectural decision records  
**Tools:** Vim, Linux/Unix, Git, shell scripting,

## EXPERIENCE

### Framework Architect & Backend Developer

Jan 2023 – Present

*Open Source & Independent Projects*

*Remote*

- Designed and implemented Gland Framework—event-driven backend architecture with broker system supporting HTTP/WebSocket, modular component isolation, and reflection-based dependency injection
- Built QIKS caching system achieving 1M+ ops/sec with O(1) complexity, implementing LRU/LFU/MRU eviction policies, TTL expiration, and dependency graph cascade invalidation
- Developed Gland Events—radix tree-based messaging broker with wildcard subscriptions, namespace isolation, and multi-broker mesh networking with loop prevention
- Authored 15+ technical articles (10K+ views) on event-driven patterns, OOP principles, algorithm analysis, and backend architecture
- Maintained 20+ open-source repositories with comprehensive documentation, test coverage, and architectural decision records

## KEY PROJECTS

### Gland Framework | TypeScript, Event-Driven, DI Container | 🌐

- Event broker with radix tree routing, wildcard patterns, namespace isolation for 10K+ events/sec
- Reflection-based DI container with automatic controller/channel registration and lifecycle hooks
- Protocol adapters (Express implemented, WebSocket planned) with strategy-based execution patterns
- Comprehensive test suite with unit and integration tests achieving 80%+ coverage

### Gland Events | TypeScript, Message Broker, Pub/Sub | 🌐

- Radix tree event broker with wildcard subscriptions and namespace isolation
- IOEvent pattern for type-safe request–response with strategy execution
- Multi-broker mesh networking with propagation tracking and automatic loop prevention

### QIKS Caching System | TypeScript, Performance Engineering | 🌐

- In-memory cache with 1M+ ops/sec, O(1) complexity using Map/WeakMap adapters
- Multiple eviction policies (LRU, LFU, MRU) with TTL/idle timeout and dependency graph invalidation
- Event monitoring system, namespace support, pattern matching for batch operations
- Functional programming interfaces with comprehensive unit and integration tests

### AGAS HTTP Client | TypeScript, Bun | 🌐

- Bun-powered CLI and library with event-driven lifecycle, interceptors, and streaming support
- Request history, saved requests, automatic retries with Docker deployment

### Vero Platform | TypeScript, PostgreSQL | 🌐

- Knowledge platform with peer review workflow, reputation system, and structured debate framework

### Additional Tools

- Cop:** Telegram bot for group moderation with Grammy framework, PostgreSQL, warning system, and admin panel
- NExa:** Python CLI tool for dev.to article fetching with Docker deployment, pretty-printing, and category filtering
- VEX:** Personal Vim configuration with LSP integration, custom keybindings, and plugin management via vim-plug

## RECOGNITION

**Framework Creator** – Gland event-driven backend architecture

**Technical Author** – 15+ articles (10K+ views), 3 comprehensive technical books

**Open Source** – 20+ maintained repositories with documentation and test coverage