

# PRAISE OLAOYE

## BACKEND DEVELOPER

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## EDUCATION

**Bachelor of Science in Computer Science with Mathematics** (Expected 2028)

3rd Year

## TECHNICAL SKILLS

**Backend:** Node.js, Express, NestJS, Fastify, TypeScript

**Databases:** MongoDB, PostgreSQL, Prisma ORM, Drizzle ORM

**Security & Validation:** JWT, bcrypt, HMAC-SHA256, RBAC, 2FA, Zod (schema validation)

**Infrastructure:** Docker, Docker Compose, IndexedDB (offline-first)

**CI/CD & DevOps:** GitHub Actions (Matrix Strategy, pnpm caching), CodeQL SAST, automated testing pipelines

**APIs & Services:** RESTful APIs, Google Gemini API, SendGrid, Dropbox SDK, Web Push (VAPID)

**Tools:** Git, Vercel, node-cron

## PROJECTS

**Nexus Analytics - Custom SDK & Backend** | *TypeScript, Node.js, MongoDB, HMAC*

[nexus-anal.vercel.app](https://nexus-anal.vercel.app) | [github.com/iampraiez/commerce\\_brain](https://github.com/iampraiez/commerce_brain)

- Engineered a 180KB zero-dependency TypeScript SDK supporting both Browser and Node.js environments with cross-platform compatibility
- Built offline-first resilience system with sophisticated queuing using IndexedDB (Browser) and Filesystem (Node), automatically syncing events upon reconnection
- Implemented event batching (10 events/batch) and asynchronous flushing achieving sub-50ms load time with zero main-thread impact
- Developed cross-environment HMAC-SHA256 request signing using SubtleCrypto and Node's crypto module with Zod schema validation for payload integrity
- Engineered GitHub Actions CI pipeline using Matrix Strategy for parallel linting, testing, and builds with pnpm caching to reduce build times
- Architected complex MongoDB aggregation pipelines for cohort retention analysis, conversion funnels, and user segmentation with sub-100ms query performance

**Job-Queue - Distributed Task System** | *NestJS, TypeScript, MongoDB, Docker*

[github.com/iampraiez/simple-job-queue](https://github.com/iampraiez/simple-job-queue)

- Architected custom "Atomic Claim" mechanism using MongoDB's findOneAndUpdate to ensure exactly-once delivery in multi-worker environments without external brokers
- Implemented lease-based processing with automatic job release after 60-second timeout, enabling fault-tolerant recovery when workers crash
- Developed autonomous worker polling system with exponential backoff and 5-attempt retry threshold for maximum reliability in mission-critical operations

- Fully containerized using Docker and Docker Compose, separating API ingest layer from execution workers for horizontal scalability

## **VeriScript - Healthcare Backend** | *Node.js, Express, TypeScript, MongoDB (In Progress)*

### *Backend Team Lead - Authentication & Security*

- Designed multi-layered security flow featuring dual-token JWT authentication with short-lived access tokens and 7-day refresh tokens in HTTP-only cookies
- Developed two-factor authentication (2FA) system using 8-digit email codes and secure nonces with time-based expiration
- Implemented role-based access control (RBAC) across four user roles (Patient, Doctor, Pharmacist, Admin) with Zod schema validation for all API endpoints
- Engineered modular service architecture handling complex registration workflows with admin-approval gates for medical professionals
- Integrated Dropbox SDK for secure document storage and Nodemailer for automated communication with custom rate-limiting for sensitive endpoints