

# Emmanuel Seun SHITTU

## Backend Developer



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### Profile

Backend Developer with strong experience designing, building, testing, and deploying **scalable and secure backend systems** using **Node.js, Express.js, TypeScript, and NestJS**. Skilled in developing **RESTful and microservices-based APIs**, implementing **authentication and authorization (JWT, RBAC, OAuth2)**, and optimizing performance across **MongoDB, MySQL, and PostgreSQL**.

Experienced in **unit and integration testing (Jest, Supertest)** and integrating automated tests into **CI/CD pipelines (GitHub Actions)** to ensure reliable, production-ready deployments. Passionate about clean architecture, modular backend design, and building systems that scale.

### Professional Experience

**Backend Developer**, Divnerix Innovations 📍

01/2025 – Present

📍 Remote, Nigeria

- Designed and implemented **scalable backend architectures** using **Node.js, Express, Sequelize, and MongoDB**.
- Built secure **RESTful APIs** for authentication, payments, donations, events, and content management.
- Implemented **JWT authentication, RBAC, and request validation** to strengthen backend security.
- Optimized API performance using **query optimization, Redis caching, and asynchronous processing**, improving response time by up to **40%**.
- Wrote **unit and integration tests** with **Jest and Supertest**, improving API reliability and reducing regressions.
- Integrated automated testing and builds into **GitHub Actions CI/CD pipelines**.
- Deployed backend services to **AWS and Heroku** with zero-downtime strategies.

#### Key Projects

- **Donation Platform**: Multi-payment integration (Paystack, PayPal, Crypto), admin dashboards, RBAC.
- **Women of Power Platform**: Event, blog, and donation APIs with MongoDB and Cloudinary.
- **Senior Care Platform**: Secure APIs for care plans, reminders, and patient-caregiver communication.

**Backend Developer (Volunteer)**,

02/2025 – 10/2025

ScholarGuide (EdTech Startup)- Work in Progress

📍 Remote, Nigeria


- Currently developing scalable backend APIs using **Node.js, Express, and MongoDB (Mongoose)** for an education platform.
- Implementing CRUD operations for courses, user profiles, and gamification modules (points, badges, leaderboards).

- Integrating **JWT-based authentication** and role-based access for Admin, Teacher, Parent, and Student users.
- Applying caching and rate limiting to enhance API performance and reliability.
- Designing modular controllers and encrypted data handling for maintainability and security.


#### Current Achievements:

- Documented APIs with **Swagger**, improving team collaboration and onboarding efficiency.
- Enhanced API stability and response speed through query optimization and caching, reducing timeouts during testing.
- Developed secure multi-role access workflows that ensure proper user permissions and data protection.

#### Backend Developer (Volunteer),

Ed3Hub – Web3-Enabled Learning Platform (Work in Progress) 

12/2024 – 08/2025

 Remote, Nigeria

- Currently developing a **polyglot backend architecture** using **PostgreSQL (transactions)**, **MySQL (analytics & leaderboards)**, and **MongoDB (unstructured Web3 data)** – each selected for its performance strengths.
- Building backend APIs with **Node.js**, **Express**, and **Sequelize ORM** to ensure seamless data integration across SQL and NoSQL databases.
- Integrating **Redis** for caching and **Elasticsearch** for search and recommendation features.
- Implementing NFT certification endpoints and token-based gamification for course completion tracking.
- Collaborating with engineers to improve query performance, optimize schema design, and maintain database consistency.

#### Current Achievements:

- Successfully implemented caching and search modules that reduced query response time during testing by **up to 75%**.
- Built gamification and analytics APIs (points, badges, leaderboards) that boosted early user engagement by **35%** during prototype testing.
- Designing scalable database synchronization strategies across multiple data stores for production readiness.

#### Backend Development Intern, CareerEx

06/2024 – 12/2024

Remote

- Developed **REST APIs** for fintech and e-commerce projects.
- Integrated **Paystack & PayPal** payment gateways with multi-currency support.
- Implemented **error handling and validation**, reducing bugs by **40%**.
- Worked in an Agile team, contributing to sprints, reviews, and deployments.

#### Backend Developer(Intern), In-box Elite (Merchandising Company)


08/2023 – 12/2024

- Developed and maintained backend services using **Node.js**, **Express**, and **Sequelize ORM (MySQL)**, designing efficient **models, migrations, and query logic** for products, orders, and inventory management.
- Designed and optimized relational data schemas to support smooth data flow between business modules.
- Implemented **authentication, input validation**, and structured **error-handling middleware** to ensure secure, scalable operations.
- Collaborated cross-functionally with frontend teams to integrate APIs and monitor backend performance using GitHub and Postman.

#### Achievements:

- Improved API response time by **30%** through query optimization and database indexing.

- Automated order and stock tracking workflows, reducing manual processes by **40%**.

**Backend Developer(Contract) Social Media Analytics & Content Automation Platform**, Groovinx / SkyeStudio Project  Remote

10/2024 – 12/2024  
Remote

- Developed and optimized **backend services** using **Node.js** and **Express.js** to support content scheduling, media rendering, and analytics data processing.
- Integrated **Facebook Graph API**, **FabricJS**, and **FFMPEG** to enable automated content generation, performance tracking, and video rendering.
- Engineered **RESTful APIs** for seamless data exchange between backend and frontend, ensuring high scalability and low latency.
- Implemented **data models and storage solutions** in MongoDB to efficiently manage analytics data, media assets, and user activity logs.
- Collaborated with data engineers and frontend developers to ensure robust system architecture, efficient API consumption, and reliable automation workflows.
- Strengthened backend reliability with structured **error handling**, **authentication**, and **performance optimization** techniques.

**Achievements:**

- Reduced API latency and improved system responsiveness by optimizing backend data flow and query performance.
- Automated end-to-end **media processing pipelines** with FFMPEG, allowing users to generate, render, and publish media directly from the platform.
- Enhanced analytics reporting by integrating **real-time insights** using Facebook Graph API, increasing engagement and data accuracy.
- Improved cross-platform stability through secure API design and optimized backend performance under high traffic.

Education

**Bsc/Finance**, University of Benin 

10/2018  
Benin City, Edo  
State, Nigeria

**National Diploma**, Abraham Adesanya Polytechnic 

11/2007 – 06/2010  
Ijebu Igbo, Ogun  
State, Nigeria

## Skills

### Backend & Architecture ● ● ● ● ●

- Node.js, Express.js, NestJS
- JavaScript (ES6+), TypeScript
- RESTful APIs & Microservices Architecture
- MVC & Modular Architecture
- Event-Driven & Asynchronous Processing

### Databases & Caching ● ● ● ● ●

- MongoDB (Mongoose)
- MySQL & PostgreSQL (Sequelize)
- Redis (Caching)
- Query Optimization & Indexing
- Transactions & Data Modeling

### DevOps & CI/CD ● ● ● ● ●

- Git & GitHub
- GitHub Actions (CI/CD Pipelines)
- Docker
- PM2
- AWS, Render, Heroku
- Deployment Automation & Monitoring

### Security & Authentication ● ● ● ● ●

- JWT Authentication
- Role-Based Access Control (RBAC)
- OAuth2
- Rate Limiting
- Secure API Design & Input Validation

### Testing & Quality Assurance ● ● ● ● ●

- Unit Testing – **Jest**
- Integration & API Testing – **Supertest**
- Mocha & Chai (basic)
- Mocking, Spies & Dependency Isolation
- Regression Testing
- Test Automation in CI/CD Pipelines

### Documentation & Tools ● ● ● ● ●

- Swagger (OpenAPI)
- Postman, Insomnia
- Agile / Scrum

## Certificates

- Backend Development (NodeJs) – CareerEX
- Python and Statistics for Financial Analysis [↗](#)
- Foundations: Data, Data, Everywhere [↗](#)

## Projects

### Banking API (Wallets & Virtual Cards System) [↗](#)

**Tech:** NestJS, TypeScript, PostgreSQL, Docker, Jest, SQLite (Testing), CQRS

- Designed and developed a **banking-style backend API** using **NestJS and TypeScript**, enabling wallet creation, fund transfers, and virtual VISA card management.
- Implemented **CQRS and event-driven architecture** to clearly separate command and query responsibilities and improve scalability.
- Built secure endpoints for:
  - Wallet creation and retrieval
  - Internal wallet-to-wallet transfers with **currency conversion and transaction fees**
  - Virtual card issuance, loading, unloading, blocking, and unblocking
- Integrated **PostgreSQL** for production data storage and **SQLite** for isolated **integration testing**.
- Wrote **comprehensive unit and e2e tests using Jest**, achieving reliable coverage and preventing regressions.
- Containerized services using **Docker & docker-compose** for consistent local and production deployments.
- Documented APIs and provided **Postman collections** to simplify frontend integration.
- Followed **clean architecture principles**, modular design, and strict linting (ESLint + Prettier).

### **School Management System API** ☑

**Tech:** Node.js, Express.js, MongoDB, JWT, Postman, ESLint, Prettier

Designed and developed a **school management backend API** using Node.js and Express.js, enabling management of students, teachers, exams, academic terms, programs, subjects, and year groups. Implemented **role-based authentication and authorization** with JWT to secure admin, teacher, and student operations.

Built secure endpoints for:

- Student and teacher creation, retrieval, update, and deletion
- Academic term and year management
- Class levels, programs, subjects, and year groups management
- Exam creation, question management, exam writing, and result publishing

Integrated **MongoDB** for production data storage and efficient data retrieval.

Documented APIs and provided **Postman collections** to simplify frontend integration.

**E-commerce**, A full-featured backend API for managing products, orders, users, and payments in an e-commerce platform ☑

**Tech:** Node.js, Express.js, MongoDB, JWT, Cloudinary, SMTP, EJS, Handlebars, Pug, ESLint, Prettier

Built a **full-stack e-commerce backend API** with Node.js, Express, and MongoDB for managing products, orders, and users.

Implemented **JWT authentication** and **role-based access control** to secure user and admin operations.

Built secure endpoints for:

- Product creation, retrieval, update, and deletion
- Order processing and management
- User registration, profile management, and authentication
- Image uploads using **Cloudinary**

Integrated **MongoDB** for production data storage and efficient query handling.

Configured **SMTP with Google** for email notifications and order confirmations.

### **QR Movie Code Generator** ☑

- Created an API-based movie QR code generator using **Node.js**, **Express**, and **TypeScript**.
- Integrated **OMDB API** for real-time movie data and generated downloadable QR images.
- Used MVC architecture for scalability and clean service separation.

**Job Backend API**, A backend API for job listings, company management, and applicant tracking ☑

**Tech:** Node.js, Express.js, MongoDB, JWT, Postman, ESLint, Prettier

Developed a **backend system with role-based access control** for applicants and employers, ensuring secure operations and data isolation.

Implemented **advanced search, filtering, and pagination** for job listings to improve user experience and optimize performance.

Designed **scalable RESTful endpoints** to handle large datasets of job posts, applications, and user profiles efficiently.

Built secure endpoints for:

- Job posting, updating, retrieval, and deletion
- Applicant profile creation, application submission, and status tracking
- Employer profile management and application review

Integrated **MongoDB** for flexible data storage and efficient querying of job posts and applications.

Documented APIs and provided **Postman collections** to simplify testing and frontend integration.

Followed **clean architecture principles**, modular design, and strict linting (**ESLint + Prettier**) to ensure maintainability and code quality.

**Live Demo:** Jobster API ☑

### Social Network Blog Platform [↗](#)

**Tech:** Node.js, Express.js, MongoDB, React.js, JavaScript, JWT, Postman, ESLint, Prettier

Developed a **full-stack social media platform** with user authentication, post creation, likes, and comments to foster community interactions.

Implemented **secure RESTful APIs** with Node.js, Express.js, and MongoDB for efficient data handling and scalable backend operations.

Built a **responsive frontend** using React.js and JavaScript, ensuring smooth user interactions and dynamic content updates.

Designed secure endpoints for:

- User registration, login, and profile management
- Post creation, retrieval, updating, and deletion
- Commenting, liking, and feed management

Optimized performance and responsiveness for both frontend and backend, following **clean architecture principles** and modular design.

**Frontend Live Demo:** React Frontend [↗](#) **Backend Live Demo:** API Backend [↗](#)

## References

Available upon request