Andrew Ihorovich Yurchenko

AI-powered Web Applications Engineer Developer

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SUMMARY

I've changed my career path to focus on what's most strategically important. With more than 9 years I applied development in my work. For the last 3 years, since the war began, I've officially been fully dedicated to improving my programming skills. My expertise spans a broad range of development, including creating interfaces, AI-powered web applications, and building subscription services, encompassing Front-end and Back-end solutions, application deployment on servers, and administration. My portfolio showcases AI-driven applications developed for data-driven growth across various business functions, redefining competitive advantage in diverse sectors.

SKILLS

Javascript	TypeScript	React	Next	Node	Express	Nest	PostgreSQL	MongoDB	Redis

PRACTICAL PROJECTS

Back-end | Nest.js Service Manager for AI Content Generation & Processing

TypeScript, Nest.js, PostgreSQL, MongoDB, Prisma, Redis, Gemini, OpenAI, Poling, RBAC, JWT

📅 2025
Main Features

- AI Service Coordination: I configured connections with AI providers, defined request templates, and managed the complete AI content lifecycle. This included content generation, interaction, deep analysis, response optimization, and detailed token usage analytics, ensuring seamless AI integration with easy deployment of new providers and services;
- **Data Synchronization & Processing**: I developed robust mechanisms for data synchronization, processing, and updates, leveraging processing queues and polling mechanisms;
- Database Management: I designed and integrated various databases, including PostgreSQL, MongoDB, and Vector Databases (VDBs), leveraging Prisma ORM for flexible data modeling;
- **Performance Optimization**: I accelerated manager operations and boosted efficiency by implementing Redis for caching and utilizing Redis Pub/Sub for real-time communication, alongside effective local caching strategies;
- **Security & Access Control**: I configured a multi-layered security system, encompassing proxy-level settings and implementing a 4-way token-based authentication and authorization connection. This included applying detailed Role-Based Access Control (RBAC) and Attribute-Based Access Control (ABAC). Additionally, I integrated advanced traffic management techniques like Rate-Limiting, Concurrent-Limiting, and Throttling.

Front-end | React.js & Next.js service for generating educational flashcards

TypeScript, React.js, Next.js, Next-intl i18n, TW, Motion, Hooks, Zustand, React Query, REST API, CSR, SSR

🔗 https://repainix.pp.ua

- **Integration:** I configured communication with Nest.js back-end modules via REST API and integrated with external service providers;
- **State Management**: I applied local and global state using Zustand alongside local storage solutions. React & Next.js Expertise: Leveraged built-in and custom React hooks (e.g., useState, useEffect, useCallback, useMemo, useAI, useFlashcardGen). Specialized in Next.js client-side, SSR, SSG, and proxy routing;
- **Performance Optimization**: Implemented lazy loading, code splitting, and memoization;
- **API & Data Handling**: I designed and developed a 2-stage proxy RESTful API connection. Utilized React Query (Tanstack) for optimistic updates, built a Domain-Driven Development (DDD) modular API factory, and implemented robust error and response handling.

EDUCATION

Engineer of Building Structures and Products

Kyiv National University of Construction and Architecture

LANGUAGES

English: C1

Ukrainian: Fluent

INTERESTS

Technologies, Education, Smart Home

Renewable sources, Energy efficiency, Business

Animals, Help to animals, Charity