

ANDRANIK ARAKELYAN

Software Engineer

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Highly motivated and results-oriented Backend Software Engineer with a strong passion for coding and building robust, scalable systems. Proven ability to design and implement backend architectures, develop efficient APIs, and ensure seamless integration of software components. Eager to tackle new challenges and continuously expand technical skills. Currently enhancing English proficiency.

PROFESSIONAL EXPERIENCE

Full-Stack Developer at Language Learning Platform (Pet Project) (January 2025 – Present)

- Architected and developed a microservices-based language learning platform encompassing web, admin panel, Chrome extension, and desktop applications.
- Implemented backend services using TypeScript/NodeJS, NestJS, PostgreSQL, MongoDB, and RabbitMQ.
- Developed frontend components utilizing TypeScript, React/NextJS, and Tailwind CSS.
- Designed features including text and video reading/watching with integrated dictionary lookup, SRS vocabulary learning system, and sentence saving capabilities.
- Gained experience across the full stack, from UI components to server-side logic and infrastructure.

Freelance Backend Developer (September 2024 – January 2025)

- Developed and implemented robust APIs using NodeJS and TypeScript with the NestJS framework.
- Designed and wrote comprehensive unit tests to ensure API reliability and code quality.
- Gained practical experience working within an AWS environment, leveraging its services for deployment and infrastructure.
- Utilized PostgreSQL for data persistence and management.

Backend Developer at Teracloud Armenia (February 2021 – October 2022)

- Led the design of the backend architecture for Blast TV, ensuring scalability and performance.
- Defined and documented backend workflows, effectively delegating tasks within the backend team.

- Authored comprehensive system and API documentation using Confluence and Swagger, improving team understanding and integration efforts.
- Conducted thorough code reviews, contributing to improved code quality and reduced bugs.
- Swiftly identified and resolved critical bugs in the production environment, minimizing impact on end-users.
- Developed and implemented numerous RESTful CRUD APIs using NestJS, enhancing system functionality.
- Designed and implemented a multi-PostgreSQL database architecture and schema, optimizing data storage and retrieval.
- Established and documented coding standards and naming conventions, promoting code consistency across the team.
- Integrated Sentry for proactive error monitoring and debugging.
- Integrated AWS S3 for scalable and reliable storage of system resources.
- Designed and implemented a microservice to abstract the handling of uploadable resources, improving modularity.
- Enhanced the authentication microservice by adding new features and resolving issues within a dynamic roles-based access control system.
- Developed an API stress testing tool, ensuring the robustness and performance of backend endpoints.
- Main Tech Stack: NodeJS, TypeScript, PostgreSQL, NestJS, AWS, Docker

Backend Developer at Hexact (March 2020 – January 2021)

- Successfully resolved critical production issues, ensuring system stability for end-users.
- Developed and optimized complex MongoDB aggregations and PostgreSQL queries, improving data processing efficiency.
- Implemented GraphQL APIs, providing flexible and efficient data fetching capabilities.
- Developed new tools leveraging a headless browser (Puppeteer) to enhance system functionality.
- Significantly improved the web crawler/spider through fixing bugs, optimizing performance, re-implementation, and extending its capabilities.
- Implemented a structured and readable logging system, improving observability and debugging.
- Integrated the Stripe payment system, enabling secure and reliable transaction processing.
- Developed APIs for generating comprehensive summaries, reports, statistics, and charts, providing valuable data insights.

- Implemented a thread pool to manage high-concurrency synchronous operations, improving system responsiveness.
- Designed the backend architecture and implemented core components for the Hexowatch product.
- Implemented a graceful shutdown mechanism and recovery strategies to enhance system resilience against partial failures and reboots.
- Main Tech Stack: NodeJS, TypeScript, PostgreSQL, MongoDB, GraphQL, Stripe

Backend Developer at Vishup Technologies (December 2018 – March 2020)

- Designed the complete backend architecture for the company's smart home system.
- Developed and implemented a custom bidirectional communication protocol over TCP for real-time data exchange.
- Implemented a flexible trigger-rule-action mechanism for controlling a wide range of Z-Wave smart home devices.
- Deployed and managed the system using PM2.
- Created an intuitive smart home system management admin dashboard using VueJS.
- Gained practical experience in NodeJS, TypeScript, PostgreSQL, MySQL, WebSocket, TCP/TLS, and binary data manipulation and processing.
- Main Tech Stack: NodeJS, TypeScript, PostgreSQL, MySQL, WebSocket, VueJS

Frontend Developer at ColibriLab LLC (Sep 2018 - Dec 2018)

- Gained foundational experience in AngularJS, HTML, CSS, and JavaScript.
- Developed problem-solving skills through effective work on challenging codebases.
- Implemented user authentication forms using Facebook and Google APIs.
- Integrated the Stripe payment form into the frontend.
- Developed new user-facing pages and features and efficiently resolved existing bugs.
- Main Tech Stack: JavaScript, AngularJS, HTML, CSS, ReactJS, Stripe

SKILLS

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|----------------------|-----------------------|-------------------|
| • TypeScript, NodeJS | • PostgreSQL, MongoDB | • NestJS, GraphQL |
| • AWS, Docker | • Unit Testing | • ReactJS, NextJS |
| • HTML, CSS | • RabbitMQ, Redis | • Linux, Bash |

LANGUAGES

English: B2 (Independent User)

Russian: B2 (Independent User)

Armenian: Native

EDUCATION

Informatics and Applied Mathematics at Yerevan State University (2010 - 2012)

CONTACTS

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<https://github.com/andranikarakelyan>