

Oleh Boloban

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EXPERIENCE

Technical University of Ukraine 'Kyiv Polytechnic Institute'

Kyiv, Ukraine

Research Assistant

01 September 2021 - Present

- Microservices and service-oriented architecture: Designed and implemented scalable systems leveraging event-driven and edge-computing architectures to process real-time data.
- Biomedical signal processing: Developed advanced filtering algorithms for analyzing and processing biomedical signals from various sensors.
- Embedded IoT systems: Built IoT solutions for medical applications using ESP32 and diverse sensors, ensuring real-time data acquisition and processing.
- AI model development: Designed and trained machine learning models for analyzing patient health metrics, enabling data-driven insights and early anomaly detection.
- Edge computing & event-driven architecture: Implemented distributed systems with localized processing at the edge, enabling faster, low-latency decision-making for critical health monitoring.
- ESP32 integration: Worked extensively with the ESP32 microcontroller, integrating it with multiple sensors for collecting biomedical data efficiently.
- Research in telemedicine: Conducted studies on remote patient monitoring and data transmission, focusing on optimizing system performance and reliability.
- Course development and teaching: Designed and delivered a web development course for undergraduate students, covering both theory and practical programming skills.
- This role provided a multidisciplinary experience combining embedded systems, AI, and healthcare, contributing to the development of innovative telemedicine solutions while mentoring the next generation of developers.
- Publications: <https://orcid.org/0009-0004-9074-4077>

SimplifyLabs

Kingstown, St. Vincent and the Grenadines

Software engineer

27 May 2024 – 30 June 2025

- Worked in high-load environments utilizing modern technologies and a microservices-based architecture.
- Development of a Telegram bot: Designed and maintained the bot using Nest.js, integrating it with external services and internal modules.
- Developed a system for virtual payment cards linked to cryptocurrency wallets, integrating payment gateways and crypto services.
- Designed architectural solutions for crypto projects using microservices and event-driven architecture, enhancing flexibility and scalability.
- Managed the full product lifecycle, including planning, implementation, service expansion, and process management within the cryptocurrency system, along with integrating new functional modules.
- This experience allowed me to tackle complex technical challenges while working in a dynamic blockchain environment, optimizing processes and expanding product functionality.

Brightgrove

Kyiv, Ukraine

Javascript Engineer

07 November 2021 – 02 May 2024

- Worked on building data-driven solutions for video content scheduling across multiple platforms, leveraging serverless computing and cloud-based architectures. Key responsibilities and achievements include:
- AWS Lambda development: Built and maintained AWS Lambda functions to generate video content schedule files for various platforms, optimizing for scalability and performance.
- Data processing optimization: Adapted data processing algorithms to fit within AWS Lambda's execution and memory constraints, ensuring efficient processing of large datasets.
- Complex SQL queries: Designed and optimized advanced SQL queries to retrieve and manipulate data in PostgreSQL, meeting complex business logic requirements.
- Data migration system: Developed a robust data migration pipeline to transfer and

transform data from MongoDB to PostgreSQL, ensuring consistency and reliability during the process.

- Template-based file generation: Implemented a system of dynamic templates for different platforms, generating data-rich files based on template specifications and database inputs.
- Cloud tools and services: Utilized AWS CodeBuild and S3 for deployment automation, artifact storage, and seamless integration with serverless environments.

SoftServe

Kyiv, Ukraine

Software engineer

12 December 2020 – 21 October 2021

- Developing financial logic for high-load transactional processes within fintech applications, ensuring high accuracy and reliability of financial calculations.
- Integrating AWS Lambda with Salesforce to enable real-time data exchange and automate critical business processes.
- Designing and optimizing complex SQL queries to efficiently manage large datasets and support high-performance database operations.
- Building complex fintech calculations for recommendation engines and discount systems, leveraging dynamic financial models and scenario-based computations.
- Collaborating with cross-functional teams to ensure product scalability and alignment with business requirements.

xUnlocked.

London, United Kingdom

Software engineer

12 December 2019 – 02 December 2020

- Created API backend for educational platform
- Created user interface based on ACF Wordpress plugin
- Implemented React application with backend API

Geniusee

Kyiv, Ukraine

Software engineer

13 August 2018 – 02 December 2020

- Developed and maintained web applications using both CMS platforms and native JavaScript tools.
- Designed and implemented scalable, maintainable web application architectures.
- Led a team of two developers, overseeing task delegation, code review, and delivery timelines.
- Applied native JavaScript techniques to optimizing performance and reduce dependency overhead.

EDUCATION

National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”

Kyiv, Ukraine

PhD of Computer Science

Sept 30, 2025

- Research in eHealth, medical artificial intelligence for classification of apnea diseases and microservices architecture
- The member of government project #18.2021.MM

National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”

Kyiv, Ukraine

Master of Computer Science

May 31, 2021

- CGPA - 84 (B)
- Research in eHealth and methods of registration breath diseases

National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”

Kyiv, Ukraine

Bachelor of Science in Mechanical Engineering

Jun 30, 2019

- CGPA - 73 (D)
- The member of Students Council

ADDITIONAL

Technical Skills: JavaScript, Node.js, React.js, Typescript, NoSQL and SQL DBs, microservices, Docker, AWS, CI/CD.

Languages: Intermediate English; Fluent Russian; Fluent Ukrainian;