



Dzelal Dupljak

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ABOUT MYSELF

Full-Stack Software Engineer — With 5+ years of expertise in high-availability architecture and infrastructure automation. Specialized in developing complex software systems—from designing robust, flexible architectures to integrating modern AI tools that elevate team productivity. Focused on delivering stable solutions that drive direct business value.

WORK EXPERIENCE

Betatel LTD - Telecom Innovations and AI Implementation: - Bulgaria, Sofia

Full-Stack Software Engineer

[01/12/2024 - Current]

Core Tech: Node.js, React, High-Availability Systems, AI Routing, Speech-to-Text (STT), Text-to-Speech (TTS), CI/CD Automation

- **Architected and scaled core telecommunications and A2P messaging platforms**, successfully managing a high-availability system processing **millions of daily API calls**.
- **Designed and integrated an intelligent AI message routing component** that analyzes traffic in real time and dynamically optimizes paths, directly increasing message delivery efficiency **15%**.
- **Developed a commercial AI voice agent (Call Agent)** for telecom clients, integrating advanced Speech-to-Text (STT) and Text-to-Speech (TTS) systems for intelligent, real-time voice interaction.
- **Optimized CI/CD pipelines and automated development workflows** by implementing AI-driven code reviews and custom AI commands for accelerated feature and service generation, drastically reducing time-to-market.
- **Led the modernization of the core tech stack (Node.js/React)** and enhanced fraud prevention systems, effectively eliminating platform vulnerabilities under peak traffic loads.

OmniStreak (performancegolf.com) - Slovenia, Ljubljana

Full-Stack Software Engineer

[01/01/2024 - 30/11/2024]

Core Tech: Python, Next.js, OpenAI / Anthropic APIs, PHP, Video Streaming Pipelines

- **Led the end-to-end technical migration of a 12-year-old platform** from a legacy PHP codebase to a modern Python and Next.js ecosystem, successfully eliminating massive technical debt while ensuring zero-downtime live system stability.
- **Designed and integrated an intelligent personalization engine using OpenAI and Anthropic APIs**, enabling real-time generation of custom content and tailored training modules based on user performance analytics.
- **Optimized core video streaming pipelines** to drastically reduce content latency, directly driving a **25% increase in user engagement**.

Libex Marketplace - South Africa, Johannesburg

Full-Stack Software Engineer (Web3 / DeFi)

[01/01/2023 - 31/12/2023]

Core Tech: Node.js, Next, GraphQL, React Native, TypeScript, Web3 Integrations

- **Built and scaled an NFT platform from MVP to production**, engineering robust APIs and frontend architectures that seamlessly handled a sudden influx of 20,000+ active users.
- **Architected low-latency blockchain integrations** and smart contract interfaces, ensuring transaction security through precise application state management.
- **Built and deployed a companion mobile platform for system administration and control from scratch** (React Native / TypeScript), enabling advanced real-time operational management and significantly accelerating team workflows.

BaitulMal - Serbia, Novi Pazar

Co-Founder

[01/02/2024 - Current]

Core Tech: Next.js, .NET, OpenAI API, PostgreSQL, Docker

- **Established the technical architecture and platform strategy from scratch**, creating a centralized system that introduced absolute transparency to financial tracking and humanitarian projects.

- **Designed and integrated custom AI automation systems using the OpenAI API**, enabling automated proposal generation for new initiatives and maximizing team velocity under lean resources.

Centar NIT - Serbia, Novi Pazar

Software Engineer & Tech Mentor

[01/03/2021 - 31/12/2022]

Core Tech: Node.js, Next, React Native, PostgreSQL, MongoDB

- **Smart Systems Development:** Led the technical execution of web applications for municipal services digitization. Established a robust and scalable architecture for complex data management, enabling the city to achieve real-time analytical visibility into its resources and drive data-driven strategic planning.
- **Mentorship & Hackathons:** Transferred production-grade engineering practices to students through intensive courses. Served as an active hackathon mentor, guiding tech teams under tight deadlines from high-pressure ideation to fully functional software solutions, equipping them for real-world development.

EDUCATION & TRAINING

Information engineer

International University in Novi Pazar [04/04/2019 - Current]

Address: Dimitirja Tucovica Bb, Novi Pazar 3630036300, Novi Pazar (Serbia)

Electrical engineering

Tehnicka Skola - Novi Pazar [01/09/2013 - 05/07/2017]

Address: Vuka Karadzica BB36300, Novi Pazar (Serbia)

SKILLS

JavaScript | TypeScript | React | Redux | ReactNative | Mui/Bootstrap | Figma | Node.js | Express.js | MongoDB | Git | Linux | Trello/Jira | C# | Python | typeorm | jest | Postman | docker | Next.js | React Query | Solidity | AI & LLM | Speech-to-Text (STT) | Text-to-Speech (TTS) | High-Availability Architecture | CI/CD Automation | Microservices | .NET | GraphQL | PostgreSQL

CERTIFICATIONS

[Anthropic Training / Technical Development]

Advanced LLM Architecture & Claude API Orchestration

[Web Summit]

International Tech Delegate – Web Summit Lisbon