



**Marko Jakic**

**Software Engineer**

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## Professional Summary

A seasoned software engineer with over a decade of expertise in full-stack development, specializing in JavaScript, TypeScript, and modern web frameworks. Adept at architecting scalable, high-performance applications with an emphasis on functional programming, distributed systems, and AI-driven solutions like workflows, agents and RAG. Proficient in Next.js, GraphQL, PostgreSQL, and advanced state management techniques. Passionate about open-source contributions and innovative software engineering paradigms.

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## Professional Experience

### **Freelance - Full-Stack TypeScript Developer (2024 – Present)**

- Engineered a robust e-commerce platform leveraging **Medusa.js 2.0**, **Next.js/React**, and **PostgreSQL**.
- Designed and implemented a seller-centric frontend utilizing **Redux-Toolkit**, **RTK Query**, **TailwindCSS**, and **ShadCN**.
- Integrated multilanguage for e-commerce with secure authentication and **Next-intl** for seamless localization.
- Developed and deployed multilingual websites employing **Astro**, **React**, and **Solid.js**: (limeta.digital & nearup-de.netlify.app)

### **Vertrical GmbH – React Full-Stack Developer (2020 – 2023)**

- Founded **Vertrical** alongside fellow freelancers as a collaborative agency to work on projects together, specializing in **scalable, regulatory-compliant software**.
- Led the development of two enterprise-grade e-commerce platforms:
  - **Optum.com**: Engineered a performant frontend using **Gatsby** with a **Nest.js** and **PostgreSQL** backend.
  - **Costplusdrugs.com**: Developed a full-stack solution employing **Next.js**, **Nest.js**, **GraphQL**, and **PostgreSQL**.

## Joyn GmbH (Joyn.de) – Freelance Senior Full-Stack Developer (React/Node.js) (2019 – 2020)

- Designed and implemented a **license management system** as part of a sophisticated **microservice architecture**.
- Utilized **Node.js**, **Kafka**, **AWS**, **Docker**, and **GitLab-CI** to enhance system reliability and scalability.
- Developed a React-based application enabling efficient digital content license management.

## Publicis Sapient – Freelance Senior Software Engineer (Freelance) (2018 – 2019)

- Architected a **high-performance e-commerce platform** for **Smart.de** utilizing **React**, **Next.js**, **GraphQL**, and **styled-components**.
- Orchestrated seamless API integrations through **GraphQL endpoints**.

## Futurice GmbH – Senior Software Engineer (2017 – 2018)

- **Edeka's Bringmeister.de**: Led initial architecture and best practices for a **React Native** mobile application.
- **Adidas Shopping Cart**: Developed a **RESTful API** leveraging **Spring Boot** and **Java 8**.
- **BMW Energy Consumption Dashboard**: Constructed an interactive **Vue.js** frontend integrated with **Highcharts** for advanced data visualization.

## Additional Experience

- **Gefasoft GmbH (2018)**: Designed a scalable Java 8/PostgreSQL backend and developed an interactive React.js frontend for industrial automation.
- **Bridgewater Labs (2016 – 2017)**: Migrated cloud APIs from **Parse.com** to a custom **Express.js** solution, ensuring seamless service continuity.
- **Westwing GmbH (2014 – 2016)**: Developed WordPress-based SEO solutions, enhancing digital presence and content discoverability.

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## Technical Expertise

- **Programming Languages & Frameworks**: TypeScript, JavaScript, React, Next.js, Node.js, Astro, GraphQL
- **Backend Development & Databases**: PostgreSQL, MongoDB, RESTful APIs, GraphQL, Nest.js, Express, Bun, Hono, Fastify
- **State Management**: Redux Toolkit, RTK Query, Zustand, Functional Programming
- **Testing & DevOps**: Jest, Mocha, Cypress, GitLab-CI, Docker, AWS, Continuous Integration
- **AI & Advanced Search**: LangGraph, Agents, Generative AI, Vector Databases, RAG
- **Frontend Technologies**: TailwindCSS, ShadCN, Styled-Components, Modern UI Libraries

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## Academic Background

- **Master of Science in Computer Science (Software Engineering)**  
*Faculty of Technical Sciences, Novi Sad, Serbia (2010)*

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## Open-Source Contributions & Research

- **Grains.js**: A lightweight reactive micro-states library for HTML.
    - [Grains.js \(https://github.com/mk0y/grains.js\)](https://github.com/mk0y/grains.js)
  - **NoDB**: A specialized API layer over PostgreSQL enabling **direct API-based data storage** and **natural language query execution**.
    - [GitHub \(https://github.com/nearup-io/nodb-js\)](https://github.com/nearup-io/nodb-js)
    - [ProductHunt \(https://producthunt.com/products/nodb\)](https://producthunt.com/products/nodb)
  - **DragForge**: A flexible JavaScript framework for intuitive **drag-and-drop** UI interactions and AI generated React components in runtime.
    - [GitHub \(https://github.com/mk0y/dragforge\)](https://github.com/mk0y/dragforge)
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## Personal Interests & Multilingual Proficiency

Dedicated to advancing software engineering methodologies, particularly in functional programming, AI-driven automation, and scalable architectures. Enthusiastic about **hiking, basketball, and historical literature**. Fluent in **English, Serbian**, and progressively enhancing **German language proficiency**.