

Neven Falica

Senior Software Engineer & Technical Lead

Zagreb, Croatia | neven@falica.net | +385 91 4847 633

Codeberg/GitHub/GitLab: elkarrde | Web: elkarr.de

Zagreb, Croatia | neven@falica.net | +385 91 4847 633

Codeberg/GitHub/GitLab: elkarrde | Web: elkarr.de

PROFILE

Senior software engineer with **20+ years of experience** building production-grade systems across backend, frontend, and infrastructure. Deep expertise in **Python and Django** — writing clean, well-tested code, owning technical decisions, and integrating complex data sources into scalable architectures. Strong track record of delivering in cross-functional environments, from early-stage startups to enterprise clients, on systems used daily by thousands of users. Background in technical leadership — architecture, mentoring, and team coordination — with an interest in applied AI for practical backend use cases.

WORK EXPERIENCE

WhereToBuyFilm.com / Independent Developer

Self-employed, Croatia | Oct 2025 – Present

- Intentional period of focused personal project development, infrastructure work, and skill deepening.
- Built and launched **WhereToBuyFilm.com** (Django, PostGIS, MaxMind GeoIP) — a production geo-aware application integrating multiple data sources for venue data, spam/bot detection, and geo-aware UX across ~400 curated locations.
- Developed **Project Lapis** (tiered EXIF remover), **Film Data Manager** (Django + PHP API + Go CLI), and a suite of browser extensions including a data acquisition tool.
- Built several **Hugo-powered websites**; all projects developed on Linux and production-tested on SBC hardware, served via DigitalOcean, Scaleway, and Virtua.cloud.
- Currently designing LLM-based content normalization and search enhancement features for WhereToBuyFilm.com.

Senior Software Developer

Spyro-Soft d.o.o., Zagreb, Croatia | Nov 2024 – Oct 2025

- Worked as a backend developer on a **PV installation benefits calculator** for the German market, coordinating between backend, external frontend developers, and management stakeholders across a **fully remote, multi-language team**.
- Explored and extended a **legacy Django codebase** built on hexagonal architecture, alongside newer system components.
- Extended and maintained **CRM and shipping process modules**; handled general bugfixing and technical documentation.

Technologies: Python, Django, Azure, Linux CLI

Technical Advisor (Part-time)

Sowar LLC, Dubai, UAE | Jun 2024 – Nov 2024

- Designed and built an **MVP stock image platform** targeting the UAE market, with a core focus on multi-language and multi-writing-system support — every content entry supported an arbitrary number of translations with frontend switching and English fallback.
- Delivered a full Django application using Django ORM and Django templating; project reached MVP stage but did not progress further.

Technologies: Python, Django, Linux CLI

Freelancer Backend Developer

IS Design Studio, Varaždin, Croatia | Jul 2023 – Jun 2024

- Provided technical development support to a non-coding designer across a range of smaller projects: **SOAP data integrations**, PHP CMSes, customized WordPress templates, and bespoke scripts — always working within existing codebases without framework support.

Technologies: PHP, MySQL, WordPress, SOAP, JavaScript, HTML, CSS

System Upgrade Specialist

DoXray d.o.o., Zagreb, Croatia | Mar 2023 – Jun 2023

- Upgraded a legacy compliance-critical platform from Python 3.5 and an outdated supporting stack to versions meeting current government and banking standards — performed on a live **OCR-based document management system** without downtime.

Technologies: Python, Django, Angular, TypeScript, LessCSS, Docker, Linux CLI

CTO and Full Stack Developer

Felloz d.o.o., Zagreb, Croatia | Dec 2021 – Mar 2023

- Served as the sole technical founder equivalent: owned architecture, infrastructure, backend, mobile, DevOps, QA, and app store operations end-to-end with no other senior engineer.
- Designed and built the full **Django/Python backend** and **REST API**, integrating three payment processors sequentially (Mollie, Unzer, Stripe) — navigating compliance failures and feature gaps under live product pressure before landing on Stripe once it became available in Croatia.
- Developed two production mobile apps (iOS and Android) using **NativeScript + Angular + TypeScript**, growing to **2,000+ monthly active users**.
- Managed inherited **multi-container Docker infrastructure** on Hetzner, including PostgreSQL, SSL certificates, and all deployment pipelines.
- Handled **Apple and Google developer certificates**, app store submission, and release procedures across both platforms.
- Prepared job descriptions, conducted technical interviews, and mentored an intern while maintaining full individual contributor output across the entire stack.
- Participated in investor conversations, providing technical due diligence and product roadmap input to potential backers.

Technologies: Python, Django, PostgreSQL, Docker, Hetzner, Angular, TypeScript, NativeScript, Stripe, Mollie, Unzer, Figma, Linux CLI

Full Stack Developer

Berliner Verlag GmbH (International Team) | Jul 2020 – Dec 2021

- Contributed to the development of a new web portal for a major German newspaper group, building significant portions of the frontend architecture before the project was handed to an external vendor.

Technologies: TypeScript, React, Gatsby, GraphQL, Node.js, NextJS, AWS, Kafka, HTML, CSS

Full Stack Developer

Software Sauna d.o.o., Zagreb, Croatia | Nov 2020 – Dec 2021

- **Construction management platform** (Angular): contributed to a team building a service covering the full construction process — permits and documentation, raw material tracking (concrete, blocks, rebar), worker assignments, and on-site location management.
- **Startup design rescue** (CSS/Angular): stepped in when a startup's designer quit the day before a deadline — fixed and completed an unconventional skewed 60° design system, preserving compatibility with existing ads and design assets.
- **Microsoft 365 interoperability** (Node.js): extended backend handlers for Office 365 integration; navigated a particularly friction-heavy development process involving remote 2FA coordination for every test cycle.
- **Electron app support** (Angular/Electron): assisted a team member developing an Angular-based Electron application communicating with specialised industrial cameras; contributed to the surrounding application layer.

Technologies: TypeScript, Angular, Node.js, Electron, CSS, Azure Active Directory

User Interface Designer

IBM Croatia for Ministry of Justice | Mar 2019 – Sep 2019

- Conducted full **service analysis** of the existing Drupal system: mapped all functionality, content types, actions, and user flows across the platform.
- Led stakeholder communication: organized and chaired meetings with Ministry staff, coordinated all frontend decisions collaboratively with their team throughout the project.
- Produced an **interactive Balsamiq prototype** to validate the proposed design direction before development began.
- Built a **fully designed Node.js scaffolding** for Ministry sign-off, then transitioned to implementation using Java, Spring Boot, and Thymeleaf in collaboration with the in-house backend team.
- Core design constraint: **mobile-first, fully responsive** across all device sizes and connection speeds — minimal JavaScript, graceful degradation from FTTH to dial-up.
- The application has been in **daily production use by every court in Croatia** since September 2019, requiring minimal changes; still loads fully in under 300ms on an empty cache.

Technologies: HTML, CSS, JavaScript, Node.js, Java, Spring Boot, Thymeleaf, Balsamiq

User Experience Architect

Fleksbit d.o.o., Zagreb, Croatia | Jun 2018 – Sep 2020

- **PDF form generator** (PHP/SVG): replaced an imprecise HTML-based form renderer with a PHP generator producing pixel-accurate SVG output populated from database data, replicating real-world official forms with full precision.
- **Kindergarten enrollment service** (Angular): analyzed and documented an existing enrollment platform, identified UI friction points, proposed data model extensions and service design improvements; began Angular redesign before being reassigned.
- **Data center visualizer** (ThreeJS): built a full 3D browser-based approximation of a customer's data center, with support for multiple switchable visual skins (modern city, sci-fi, real-world buildings) without page reload. Designed a custom **DSL for defining node locations and connections** between infrastructure components (web servers, Kafka, Prometheus, databases, etc.); delivered as a functional demo/MVP.
- **Energy grid visualizer** (ThreeJS): applied the same 3D approach to a backend-supplied model of an electricity and gas distribution grid; every node was interactive and carried full domain metadata.
- **Money laundering detection frontend** (Angular): built a graph-based visualization of inter-account connections across multiple banks using a node-link approach (similar to Obsidian's graph view), alongside map and master-detail table views. Handled significant data normalization on the frontend due to denormalized backend output.

Technologies: PHP, JavaScript, VueJS, AngularJS, Angular, PostgreSQL, SVG, Laravel, RESTful API, WebGL, ThreeJS

Front-end Developer

Pomični Zarez d.o.o./Very Big Things, Zagreb, Croatia | Dec 2017 – Jun 2018

- Served as the team's non-Clojure specialist in a shop otherwise running ClojureScript frontends with Ruby and Haskell backends — all Angular, Node.js, and general web work landed here.
- **Steel building configurator** (Angular): extended the non-3D portions of a complex Angular application for configuring and ordering custom steel sheds and hangars, including Stripe payment processor bugfixes. The inherited 3D builder component was maintained by a separate Belarussian team whose codebase — including variable names and all documentation — was written in Belarussian Cyrillic; navigated this to understand system boundaries without modifying that layer.
- **WWF foundation website** (Lektor): inherited and completed a static site for several WWF-funded local projects under significant time pressure. Sliced and prepared all graphics from an unsliced brief, reproduced design details in CSS3, entered and proofread large volumes of copy (beyond scope, but necessary before publishing), and delivered on time.

Technologies: JavaScript, Angular, Node.js, Lektor, CSS3, Stripe

Backend Developer / Team Leader

GamingBattleGround.com, Sofia, Bulgaria | May 2017 – Nov 2017

- Served as CTO and technical coordinator: managed a backend team writing PHP/PostgreSQL services and liaised with an external frontend developer, while personally owning the Node.js middleware layer.
- Built a **Socket.io/Node.js multiplayer coordination service** handling concurrent match synchronization — game starts, live status, and score reporting — for up to 64 simultaneous players per match.
- Implemented **conflict resolution logic** for disputed match outcomes (multiple players claiming victory), and explored approaches to event queuing and synchronization.
- Proposed and validated a **PostgreSQL pub/sub approach** as an alternative to RabbitMQ — benchmarked both under real conditions and demonstrated equivalent throughput and utility without introducing an additional infrastructure component.
- Optimized Node.js memory usage to operate within **2GB Heroku dyno constraints** on larger matches; managed result synchronization across multiple concurrent handlers.
- Full stack deployed on **Heroku** dynos and platform services.

Technologies: JavaScript, Node.js, Socket.io, PostgreSQL, PHP, Heroku

Web Solutions Architect

Element d.o.o., Zagreb, Croatia | Jun 2016 – May 2017

- Built a **teacher-facing educational portal** for a major Croatian textbook publisher, designed to attract high-school teachers by providing web-accessible versions of the full book catalogue alongside rich exam and exercise material.
- Books were programmatically converted from **LaTeX source to PDF, then to optimized PNGs** for web delivery.
- Developed a **multi-matrix exam builder** with print-optimized PDF output generation — composing exam sets across multiple question/group assignments for teacher use.
- Built on a fully JavaScript stack: **Node.js + ExpressJS + Socket.io** backend, **RethinkDB** with sharding and replication, **KnockoutJS** frontend with **MathJax** for mathematical notation rendering.

Technologies: JavaScript, Node.js, ExpressJS, Socket.io, KnockoutJS, RethinkDB, MathJax, HTML5, CSS3

User Experience Architect

Mentat Labs d.o.o., Zagreb, Croatia | Mar 2015 – Jun 2016

- Built a **Sberbank cashflow calculator** in KnockoutJS — a utilitarian, Excel-like financial tool designed to provide the same functionality as a spreadsheet without being tied to a specific machine or installation.
- Provided **billable technical support** for the company sharing the office space.
- Built a range of **smaller tools and scaffolding utilities** in Node.js to support a non-coding designer colleague, optimizing build runners for minimal friction for average frontend developers.
- Began development of an **educational content portal** (KnockoutJS frontend, RethinkDB backend) — the same project later completed at Element d.o.o.

Technologies: JavaScript, KnockoutJS, RethinkDB, Node.js, ExpressJS, HTML5, CSS3

Senior Web Developer & User Experience Architect

Instantor AB, Zagreb, Croatia | Oct 2011 – Mar 2015

- Worked as the frontend specialist in a Swedish early-stage fintech startup building KYC, risk evaluation, and default probability services — backend team handled Scala, Selenium-based scraping, and PostgreSQL.
- Built and maintained a **large admin panel** for internal use: managed clients, API keys, scraping and data acquisition progress, and live user data. Designed to impress as much as to function — a deliberate showcase for the Swedish leadership.
- Developed the **core user-facing entry point**: a deceptively simple login screen that transitioned into realistic bank frontend replicas, enabling the backend Selenium scrapers to acquire mobile banking session data for KYC processing.
- The injection mechanism used a **lightweight JS snippet** that embedded an iframe into the host bank page, with **PostMessage-based dynamic height synchronization** to maintain seamless visual integration with the surrounding page.

Technologies: PHP, JavaScript, CoffeeScript, PostMessage, content injection, HTML5, CSS3

Web Developer & Designer* (2011 and earlier)

- Built and delivered a wide range of client projects across nearly a decade: presentational websites, low-volume booking systems, custom CMSes, webshops, photo galleries, and multimedia platforms — primarily in PHP, MySQL, HTML, and CSS.
- Designed and built **multiple custom CMSes** engineered to slot into existing static sites with minimal disruption — typically requiring only a PHP header include and inline content sections, no structural changes to the host page.
- **First Croatian payment gateway integration**: among the first developers to integrate what is now known as **Monri**; integrated **CorvusPay** on multiple separate projects.
- Built a **video recipe platform** — one of Croatia's first recipe sites serving actual video content, running on **Microsoft Media Services**. Handled full-stack delivery including server hardware setup, OS and software installation, and ongoing system management.
- Co-developed an **early Twitter-like microblogging service** (early 2008), before Twitter had meaningful presence in the Croatian market.
- Built a **CD and media webshop** frontend; designed a complete **visual identity for a local TV station** including transparent overlay graphics for broadcast use.
- Built a **booking platform for a yacht charter company** as sole developer, inheriting an existing design and implementing the full booking flow (PHP, MySQL, jQuery).
- Built a **white-label vacation rental booking platform** for Iskon Internet as sole developer — a one-stop-shop solution for Croatian coastal vacation home and apartment owners (PHP, MySQL, KnockoutJS, LessCSS).
- Delivered countless web assets of the era: static JPEG banners, animated GIFs, and **Adobe Flash** interactive content.
- Co-developed a **manuscript and journal management system** (PHP, PostgreSQL, 2008) for a world-renowned mathematical journal — still in daily production use, managing the full author-to-press workflow including multi-stage peer review and LaTeX output.
- **Career beginnings in print design** (pre-2002): exhibition booklets for painting shows, CD packaging and box designs.

Technologies: PHP, MySQL, HTML, CSS, JavaScript, Adobe Flash, Microsoft Media Services, PaintShop Pro

Board Member & Technical Advisor

Croatian data protection NGO | 2024 – Present

- Serve as board member and technical advisor, providing technical and data protection expertise on a volunteer basis.

PERSONAL PROJECTS

-
- **ISO3200.org**: Photography blog with ~1,000 monthly readers, focused on analog photography.

SKILLS

Primary Stack

Python, Django, PostgreSQL, PostGIS, Docker, Linux CLI

Backend

Node.js, ExpressJS, PHP, Laravel, Go, RESTful API, GraphQL, Kafka, RabbitMQ, Pandas (familiar)

Frontend

React (limited), Angular, VueJS, TypeScript, HTML5, CSS3, SASS/LESS, WebGL, ThreeJS

Databases

PostgreSQL, MySQL, MongoDB, RethinkDB, MariaDB

Infrastructure & DevOps

Nginx, Apache, AWS, Azure, DigitalOcean, Scaleway, Git, Linux CLI

AI & Emerging (in progress)

LLM API integration, vector search concepts, prompt engineering — actively applying to personal projects

Tools & Platforms

Figma, Git, Arduino, WordPress, Symfony, Socket.io, Hugo, Google Analytics

Design & Multimedia

Adobe Photoshop, Illustrator, Lightroom, Premiere Pro, Corel Draw, Fusion 360, SketchUp, SolidWorks

COMMUNITY TALKS

- *Less is More – LessCSS Primer*, ZgPHP Meetup #9, May 2012
- *KnockoutJS Primer*, JsZg Meetup #14, March 2015
- *Why I Stopped Using CoffeeScript*, JsZg Meetup #29, September 2016

EDUCATION

- **Master of Information Technologies** (Unfinished)
Polytechnic Faculty of Zagreb, Croatia (2003–2008)
- **Bachelor of Mechanical Engineering**
Faculty of Mechanical Engineering and Naval Architecture, Zagreb, Croatia (1997–2001)
- **Certification:** IBM Certified Associate Developer, Rational Application Developer V8

LANGUAGES

- **Croatian:** Native
- **English:** C2 (Listening, Reading, Writing), C1 (Spoken)

ADDITIONAL

- Photography (digital and film), darkroom printing, 3D modeling
- **Driving License:** Category B