Marko Ritachka

Full-Stack Software Engineer
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Full Stack Developer & Cloud Architect with 8+ years of experience transforming software solutions into marketable, scalable SaaS products and contributing to massive-scale Enterprise Systems. Expertise spans end-to-end product development (Vue/React, Node/Express, Cloud), Java/Spring backend architecture, and enterprise platform reliability, specializing in high-volume CI/CD pipeline engineering (FABS) and security enforcement. Proven track record leading projects from ideation to deployment, utilizing advanced techniques like machine learning and real-time data processing to provide high-quality, user-centered solutions, and driving innovation while ensuring compliance in complex regulatory environments.

Skills

Full-stack Development • Enterprise Software Architecture • HTML/CSS/Javascript/Typescript • Java/Spring • High-Volume CI/CD & DevOps • Databases Automated Testing • Cloud Infrastructure (GCP/AWS/OCI) • UI/UX • Machine Learning / AI / LLMs • Performance Optimization • Project Management

Languages: Fluent in English, Ukrainian

Professional Experience

Oracle **San Diego, CA**

Senior Software Engineer, Fusion Release Engineering (FABS CI/CD) **11/2024 - Present**

Architect and maintain the FABS CI/CD platform, the massive-scale internal release system for Oracle Fusion Applications. This system supports both legacy (Monolith) and modern, component-based (Spectra) microservice projects, ensuring reliability, compliance, and performance across the build, deploy, test, and release stages. Key contributions:

- **Engineered Next-Generation CI/CD Architecture & Reliability**: Developed core pipeline functionality for the new Spectra project type, including defining comprehensive Quality Gate configurations to standardize component-based development. Significantly improved concurrent build stability by implementing optimistic locking logic in build event handlers, eliminating intermittent data loss and ensuring accurate status reporting across multi-component projects.
- **Enforced Critical Security and Quality Compliance**: Mandated and integrated critical security standards directly into the CI/CD flow, engineering quality gates to make essential checks (such as secret detection scans and DAST scans) mandatory requirements for production-bound artifacts. Resolved complex quality computation defects, ensuring accurate overall quality reporting for retriggered and rebuilt snapshots across all pipeline stages.
- **Optimized Performance and Integrated Core Tools**: Drove platform stability and performance by migrating critical internal tool integrations (ADE, ESE, CIHUB) to new OAuth2 authentication flows and implementing a local caching layer for external directory services (IDCS/YPMasterAccount). Optimized connection pools and timeouts to mitigate API delays and resolve recurring service thread issues in high-volume build environments.

Incept 3D **San Diego, CA**

Lead Software Developer, Full Stack Engineer **10/2018 - 11/2024**

Sole developer, pivotal in transforming company operations and enhancing productivity through the full-stack development of FormFactories, an in-house project management software that evolved into a market-leading SaaS product. This role was central to establishing major new revenue streams. Key contributions include:

- **Sole Developer of FormFactories:** Orchestrated the entire development of our cloud-based 3D printing order management software that boosted company 3D printing operations by over 800%. Managed all development stages from architecture and UI/UX design to legal frameworks and customer support, transforming an internal project into a profitable SaaS offering adopted by major manufacturers including a Fortune 500 company.
- **Engineered Advanced Features:** Created an instant quoting system using TensorFlow for real-time 3D model analysis, reducing quoting time from several days to milliseconds, and significantly enhancing pricing accuracy. Also developed a system for remote monitoring and control of 3D printers, boosting job file delivery speed by 8000% and daily production by 40%.
- **Improved Operational Efficiency:** Implemented a machine health & repair dashboard that raised fleet uptime from 63% to 96%. Designed tracking and management tools for end-to-end manufacturing process oversight.
- **Led Strategic Initiatives and Compliance:** Guided software development to meet stringent industry standards, enhancing data security and customer satisfaction. Fostered cross-functional collaborations to align product development with client needs and strategic goals.
- **Pioneered Hardware Innovations:** Led the design and production of specialized, large-format 3D printers for advanced applications in high-temperature and multi-material printing. Established and trained a new engineering team to maintain hardware development.
- **Scaled System Capabilities:** Architected integrations with multiple RESTful APIs, significantly enhancing the automation of invoicing, logistics, and manufacturing processes. This innovation enabled handling over 14x as many orders without additional support staffing, dramatically boosting operational efficiency and client engagement.

UCSD Projects and Consulting **San Diego, CA / Weaverville, CA**

Software Developer, Consultant, Prototyping Engineer **2015-2019**

Contributed to diverse software initiatives and community projects, driving innovation, usability, and community impact.

- **App Development:** Developed and launched 'Bizepi,' an iOS app facilitating local freelance services, from gardening to jewelry making. Enabled ease of service discovery & management, increasing financial opportunities for local service providers.
- **Web Development:** Provided web development services for multiple client websites utilizing React, Vue, and vanilla HTML / CSS / JavaScript. Incorporated real estate platforms with MLS data integration, focusing on dynamic, user-centric solutions.
- **Community Consulting:** Established 3D printing at Trinity Alps Unified School District, supporting Trinity Alps Performing Arts as a technical director, and supplying IT services for Trinity Theatre.

Education

Bachelor of Science, Computer Science (2015 - 2019) **University of California, San Diego**

Projects

Web and Mobile Apps

- Developed a web application that utilizes LIDAR data for analyzing and mapping deep bodies of water in mountainous regions (Vue.js/Node.js)
- Engineered a platform for real-time, wireless control of animatronics through iOS facial tracking, showcased at themed events (C++, Swift, Python)
- Created a scalable 3D printer management dashboard for monitoring and connecting to large fleets of 3D printers on a network (React/Node.js)
- Developed a Python-based full-color 3D model slicer, advancing color-blending printing capabilities in consumer-level FDM printers.
- Developed a web platform for on-demand Etsy shop managers to streamline their additive manufacturing workflows (Vue.js/Node.js)
- Created 'Hexterra', a web-based AR game blending real-world exploration with strategic gameplay and interactive entertainment (Vue/Node/Python)
- Organized several large-scale events at UCSD such as the 'Make-a-thon' hardware hackathon, while developing a mobile app for interactive participation and controlling our Bluetooth-based robotics kits (Flutter, Swift, C++, Python)