Vladimir Ćirković

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Education

Faculty of Organizational Sciences Belgrade, Serbia
MSc. Informatics and Software Engineering

Work experience

BVNK
Senior Software Engineer 03/2023 - Present

- BVNK is a digital asset financial services platform providing banking and payment solutions.
- Implementing a high-performance cryptocurrency trading platform using Java-based microservices, optimizing transaction processing speed, system scalability, and incorporating fault-tolerant patterns to minimize downtime and ensure high availability.
- Building an event-driven store leveraging Kafka for (soft) real-time data streaming, creating a historical record of events to support complex auditing, observability and traceability needs.

Vroom.com
Tech Lead 02/2021 - 03/2023

- Vroom is an e-commerce platform for buying and selling used vehicles.
- Led the design and implementation of backend services with Go, Kafka, PostgreSQL, and Kubernetes for container orchestration and scalability.
- Optimized high-volume transaction services and third-party integrations, implemented robust error handling and retry mechanisms to ensure resilience during high-load periods, while adopting efficient data structures and caching strategies to minimize latency.

RMS
Senior Software Engineer 04/2019 - 02/2021

- Risk Management Systems (acquired by Moody's) is a leading provider of catastrophe risk modeling software and services.
- Engineered a high-throughput, scalable Java backend for a RMS's flagship application, utilizing advanced concurrency techniques to efficiently process large volumes of data from multiple warehouses.
- Designed a treaty reinsurance platform using Kotlin microservices, implementing event sourcing and CQRS to improve data consistency, scalability, and system reliability. Leveraged event sourcing to maintain a detailed historical record of state changes, enabling complex auditing and traceability. Applied CQRS to separate read and write operations, optimizing performance and responsiveness under high transaction volumes, while ensuring that business-critical events were processed and stored reliably.
- Developed a catastrophe modeling solution in Scala, adopting a purely functional programming paradigm with the Cats library. Leveraged functional constructs such as immutability, higher-order functions, and monads to create predictable, testable code, significantly reducing side effects and improving code stability. By using Cats' type classes for error handling and data transformation, the solution achieved reduced error rates, improved fault tolerance, and enhanced modularity, enabling seamless handling of complex data processing workflows critical to accurate catastrophe risk modeling.

Relax Gaming
Senior Software Engineer 05/2016 - 04/2019

- Relax Gaming is a B2B iGaming provider offering unique content and platform solutions.
- Designed and developed a scalable, concurrent Java game server for a daily fantasy gaming platform, leveraging microservices architecture to ensure modularity and maintainability. Employed message-driven communication with RabbitMQ for asynchronous processing of game events, ensuring non-blocking operations and reducing latency.
- Successfully implemented multiple slot machine game engines for the Silver Bullet Casino platform, expanding the game variety and improving player engagement. Designed and developed the core game logic, including RNG algorithms to ensure fairness, consistent payouts, and compliance with industry standards. Leveraged mathematical models to create exciting gameplay mechanics such as weighted reels, payline variations, and bonus rounds, ensuring both high player retention and balanced game performance.

Interactive Data
Team Lead 03/2013 - 05/2016

- Interactive Data (now part of Intercontinental Exchange) is a provider of financial market data and analytics.
- Oversaw the design and development of PrimeTerminal, a Java-based desktop application for private banking and asset management, adopted by numerous financial institutions. Developed with Java and Swing to deliver a responsive, intuitive interface for real-time market data visualization, portfolio performance tracking, and investment management tools. Integrated MongoDB for specific data storage needs, optimizing query performance to handle and display large volumes of financial data efficiently.
- Led a cross-functional team to execute S&P CapitalIQ's largest customization projects, coordinating closely with clients and stakeholders to meet complex requirements. Drove code quality and best practices, improving delivery speed and boosting client satisfaction.

Vast.com
Software engineer 10/2006 - 03/2013

- Vast is a big data-as-service platform providing consumer and market insights.
- Designed and developed a high-performance, Java-based data processing pipeline tailored for big data workloads, significantly improving data throughput and quality. Utilized advanced concurrency techniques, including parallel processing and asynchronous tasks, to handle high-volume data ingestion and transformation with minimal latency.
- Implemented a robust engine for text parsing, extraction, and normalization, streamlining data handling processes and drastically reducing manual data entry. Developed efficient string parsing algorithms to identify and extract key data patterns, using tokenization to manage complex, unstructured text inputs. Leveraged tries for fast and memory-efficient keyword matching and normalization, allowing rapid lookups and consistent data standardization across large datasets.

Skills

Programming Languages:	Java, Go, Scala, Kotlin, Typescript, Swift
Infrastructure & Architecture:	Distributed Systems, Kubernetes, AWS
Databases & Messaging Systems:	SQL and NoSQL databases, Kafka
Soft Skills:	Team Player, Fast Learner