Michele Riva

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Profile

Software engineer and technology leader with over 12 years of experience building products across startups and global enterprises. Published author and international speaker with 100+ conference appearances. Originally from Italy, now based in San Francisco on an O-1 visa recognizing extraordinary ability in science and entrepreneurship.

Professional Experience

Co-Founder, CTO, Board Member, OramaSearch Inc., San Francisco, USA
Jan 2023 — Present

- Authored three patents on three new approaches to distributed full-text and vector search.
- Designed the Orama Cloud architecture, serving millions of queries per month (up to 15k req/s) with 100% uptime.
- Architected and built OramaCore, a scalable, multi-tenant, distributed AI runtime built in Rust and Python.
- Created and maintained Orama (~10k GitHub stars), the most powerful and feature-rich JavaScript-based full-text and vector search engine.
- Hired and managed the entire operations team, consisting of six full-time engineers, one engineering manager, one developer relations engineer, and one product designer.
- Raised $2M angel round and $4M seed round to create the new generation of distributed full-text and vector search engines from Village Global, K5 Global, ZeroPrime, and executives from Datastax, Prisma, CommerceLayer, Nearform, and more.

Staff Software Engineer, NearForm, Waterford, Ireland
Feb 2022 — Jan 2023

- Scaled EA Sports' Xbox notification system from 400K to 2.5M daily messages through architectural refactoring and performance optimization - achieving 6× throughput with no increase in infrastructure cost.
- Defined cloud infrastructure blueprints for startups leveraging NearForm's engineering teams, improving deployment consistency and scalability across multiple client products.
- Established and managed NearForm's collaboration with ECMA International and TC39, leading the team responsible for delivering JavaScript polyfills supporting new internationalization features in EcmaScript.

Senior Software Engineer, Paramount, New York, USA
Apr 2020 — Feb 2022

- Architected and implemented Paramount's new multi-tenant platform, hosting over 250 websites (streaming services, news sites, and smart TV webviews) on AWS, Next.js, TypeScript, and Kubernetes. Enabled CI/CD with multiple daily deployments across a 500-developer organization, reducing release time by 300% (from several hours to under one).
- Built a real-time JavaScript/TypeScript compiler and bundler that accelerated monorepo builds by 200%, dramatically improving developer productivity.
- Established department-wide testing strategies and best practices, boosting performance by 50% and achieving 98% code coverage across a monorepo exceeding 5,000 files.
- Led technical and behavioral interviews for 50+ senior engineering candidates, helping shape hiring standards and team culture.

Senior Software Engineer, Accenture Song, Monza, Italy
Jan 2018 — Apr 2020

- Led development of Maserati's next-generation car configurator, a high-performance system enabling real-time customization while enforcing complex option-compatibility rules through constraint-solving algorithms. (Node.js, TypeScript)
- Architected and implemented an image-generation backend in Go, producing dynamic vehicle renderings on demand in under 10ms, dramatically improving responsiveness and customer experience.
- Drove modernization of legacy systems by migrating multiple teams to contemporary Go and Node.js-based stacks, increasing delivery velocity and maintainability, achieving up to 4× faster build and deployment cycles.

Software Engineer, GMDE s.r.l., Monza, Italy
Dec 2014 — Dec 2017

- Engineered large-scale publishing platforms for leading Italian newspapers (e.g., Il *Sole 24 Ore*, *Avvenire*), optimizing performance, accessibility, and uptime for millions of monthly readers.
- Built modern web applications using PHP Symfony, Node.js, and React, introducing modular architectures and reusable UI components that reduced feature delivery time by 30%.

Patents

Operating a distributed search index in a content delivery network
Mar 2024

Developed a distributed search indexing system that partitions document indexes into executable field-specific segments, enabling independent query processing and scalable global distribution via CDN publication. Patent number: US11829426B1

Operating in a content delivery network a distributed search index for performing vector search
Jul 2025

Designed an index-shard data structure for semantic search that compares query embeddings to document embeddings, selecting and returning document IDs within a defined similarity threshold to enable efficient, distributed semantic retrieval. Patent number: US20250225170A1

Operating in a content delivery network a distributed search index based on an automatically-selected set of documents properties
Oct 2025

Built an automated indexing system that uses inference and large language models to analyze document contents and intelligently select the most relevant properties to include in a search index. Patent number: US20250322019A1

Education

Purdue University Global
B.Sc. Information Technology

- The graduation date is expected to be March 16th, 2026.
- Current GPA: 3.96.
- Attended the University online while working full-time and raising a total of $6M in funding.

Honors and Awards

Microsoft Most Valuable Professional
Feb 2022 — Jul 2025

Google Developer Expert
Oct 2021 — Present

Courses

Certified Scrum Product Owner, The Knowledge Academy
Nov 2021

Extra-curricular activities

Book Author, Packt Publishing
Nov 2020 — Jan 2022

Authored the book "Real-World Next.js - Build scalable, high-performance, and modern web applications using Next.js, the React framework for production".

TC39 Delegate, ECMA International
Apr 2023 — Present

Representing Orama as a TC39 delegate, where I help define and standardize the JavaScript programming language.

Program Committee Member, Codemotion
Jan 2022 — Jul 2025

Selecting speakers for Codemotion, one of the largest tech conferences in Europe.

Program Committee Member, Node Congress
Jan 2023 — Jul 2024

Selecting speakers for Node Congress, the largest Node.js conference in Europe.

Additional Information

Links: https://github.com/MicheleRiva, https://linkedin.com/in/micheleriva95