

MATTEO LOMBARDI

Tech Lead | Senior Software Engineer | Backend & Cloud Systems

CONTACT INFORMATION

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Tech Lead / Senior Software Engineer with 10+ years of experience designing, building, and operating backend systems, cloud-based applications, and data-intensive platforms.

Strong background in distributed systems, relational databases, API design, microservices, and cloud environments, with hands-on experience across supply chain, telecommunications, education technology, and enterprise software.

Experienced in technical leadership, stakeholder management, mentoring, and making pragmatic architectural decisions aligned with product and business goals.

Focused on delivering scalable systems under real-world constraints and high-load environments.

PhD in Computer Science with a background in Artificial Intelligence, data engineering, and applied research.

CORE TECHNICAL SKILLS

Backend & Architecture

- System Design, Microservices Architecture, API Design
- Distributed Systems, Async Processing (Kafka), Event-driven systems

Database & Data Layer

- Relational databases: MySQL, PostgreSQL, Oracle
- SQL, PL/SQL, query optimization, indexing, transactions
- Data modelling, performance tuning, data pipelines
- NoSQL: DynamoDB, MongoDB

Cloud & DevOps

- AWS (Lambda, CloudWatch, S3, EC2), CI/CD (Jenkins)
- Monitoring (Splunk), Infrastructure optimization

Programming

- Java, JavaScript, Node.js, TypeScript, Python

Leadership & Delivery

- Technical Leadership through influence
- Agile/SCRUM, Stakeholder management
- Business impact-driven decision making

PROFESSIONAL EXPERIENCE

Senior System Engineer - Nike

April 2023 – April 2026 | Hilversum, Netherlands | Remote

- Designed and maintained AWS-based backend services supporting supply-chain and logistics operations across European wholesale flows.
- Built and improved event-driven data pipelines using Kafka and AWS services (Lambda, S3, CloudWatch), supporting asynchronous processing and operational monitoring.
- Developed Java and Python microservices, including AWS Lambda components, with focus on scalability, reliability, and maintainability.
- Optimized data flows and database interactions across MySQL and Snowflake, contributing to improved performance and reduced operational costs.
- Reduced cloud operational costs by 70% through infrastructure and process optimization.
- Monitored production systems using Splunk and AWS CloudWatch, investigating incidents and improving system observability.
- Took ownership of backend services supporting critical supply-chain processes.
- Contributed to architectural decisions balancing performance, cost, and system complexity.
- Worked with engineering, operations, and business stakeholders to align technical improvements with supply-chain needs.

Senior System/Business Architect, Test Team lead - Atos SE

June 2018 – March 2023 | Rome, Italy | Hybrid

- Led and coordinated a team of 5 engineers across development, testing, and delivery activities.
- Defined test strategies and ensured system reliability and performance.
- Acted as technical reference for architecture and integration decisions.
- Designed and developed enterprise-grade applications on Pega CRM for telecom and public sector clients.
- Contributed to large-scale enterprise deployments in telecom and public sector environments.
- Developed REST and SOAP services integrating enterprise platforms with external systems of record.
- Worked with Oracle databases, PL/SQL, WebLogic, JBoss, GitLab, Jira, and CI/CD delivery processes.

Clients:

TIM (Telecom Italia) – Italy

Agentschap Telecom – The Netherlands

SELECTED PROFESSIONAL ACHIEVEMENTS

- Reduced cloud operational costs by 70% through system and infrastructure optimization at Nike.
- Contributed to backend systems supporting high-volume supply-chain operations across Europe.
- Contributed to architectural decisions in distributed systems under real-world constraints.
- Led a team of 5 engineers in enterprise software delivery and testing activities.
- Improved system performance in high-load environments through backend and data-layer optimization.
- Published peer-reviewed research in Artificial Intelligence and Information Retrieval.

CERTIFICATIONS

- AWS Certified Cloud Practitioner
- AZ-900 Microsoft Azure Fundamentals
- Pega Lead System Architect
- Professional Scrum Master (PSM I)

- Pega certifications: Data Scientist, Robotics System Architect, Decisioning Consultant, Business Architect
- IELTS C1
- DELF B2

RESEARCH & EARLY CAREER

Researcher and Data Scientist - Griffith University

April 2015 - December 2018 | Brisbane, Australia

Researched and developed methodologies for the automatic recognition of educational content in online resources.

Applied data analysis and data engineering techniques to Big Data (Java, R).

Published and presented academic papers at international conferences in Artificial Intelligence, Information Retrieval and Computer Systems.

Teaching and tutoring the following subjects:

- Database Systems and Administration (3612ICT)
- Computer Systems and Networks (1007ICT)

IT and Education Manager - Shafston International

June 2014 - June 2015 | Brisbane, Australia

Managed the Moodle e-learning platform and integrated Artificial Intelligence features for user-student personalization.

Handled Web-based platforms and institutional websites.

Coordinated adoption of learning and computing resources.

Learning Management Systems Administrator - Roma Tre University

November 2013 - March 2014 | Rome, Italy

Managed and improved the Moodle instance of Roma Tre University with the latest technologies in Artificial Intelligence in education.

Tested an intelligent tutoring system for teachers and improved its user interface.

EDUCATION

PhD in Computer Science (AI) – Griffith University

Research focus: web information retrieval, educational resource classification, machine learning.

MSc in Computer Science Engineering – Roma Tre University

BSc in Computer Science Engineering – Roma Tre University

RESEARCH & PUBLICATIONS

- Google Scholar profile: <https://scholar.google.com.au/citations?user=413unxgAAAAJ>
- Best Paper Award, Australasian Web Conference, Australian Computer Society, 2018.
- PhD scholarship, Griffith University, 2015–2018.
- Research scholarships from Griffith University, Roma Tre University, and CASPUR.

Keywords: system design, distributed systems, SQL optimization, microservices, AWS, backend, scalability, performance, concurrency