

# Marco Grasselli

Rome, Italy (Open to Relocation to UK)

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## PROFESSIONAL SUMMARY

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Lead-level Software Engineer with 9+ years of experience designing and implementing scalable, secure, and highly available distributed systems. Expertise in cloud-native architecture, AI/ML integration, and modern web technologies. Proven track record leading engineering teams, automating infrastructure, and delivering innovative AI-driven solutions in production. Recognised by IBM as a top 1% technical contributor globally. AWS Certified Solutions Architect – Associate.

## CORE COMPETENCIES

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- Distributed Systems Architecture & Cloud-Native Application Development
- AI/ML Engineering: Generative AI, NLP, Chatbots, Document Summarisation
- Python, Java (Quarkus), TypeScript/ReactJS
- AWS Infrastructure Automation (Terraform, Tekton, EKS)
- CI/CD, Test Automation (TDD, BDD)
- Technical Leadership, Mentoring, Agile Practices

## EXPERIENCE

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### • IBM

Advisory Application Architect - Senior Software Engineer

Rome, Italy

Jun 2021 - Present

#### Key Projects

- Led the architecture and development of a distributed search application using Golang, Elasticsearch, GraphQL, and MongoDB, improving query performance by 40% and reducing infrastructure costs by 25%.
- Designed and implemented Generative AI services for legal applications: a specialised law chatbot (85% accuracy) and a document summarisation service (70% faster processing).
- Developed and deployed an AI-powered “copilot” assistant in **Python**, enabling magistrates to query legal documents in natural language, improving case preparation efficiency by 60%.
- Configured and automated AWS EKS cluster infrastructure using Terraform and Tekton, enabling scalable, secure, and repeatable environment provisioning.
- Implemented CI/CD pipelines with Jenkins, Helm, and Istio for 50+ microservices in OpenShift and AWS, achieving 99.9% uptime and reducing deployment time from days to hours.
- Championed coding standards, test automation practices (TDD/BDD), and mentored junior engineers, improving team productivity and code quality.

#### AI Public Sector Leadership

- Core member of IBM’s Public Sector AI Enablement team, providing guidance, best practices, and technical support to multiple project teams delivering AI solutions for government clients.
- Created internal guidelines and reference architectures for responsible AI adoption in the public sector.
- Delivered technical talks, workshops, and training sessions to IBM teams on AI integration, compliance, and innovation.

#### Recognition

Apr 2024

- Selected to attend IBM TECH 2024 in Dubai – recognising top 1% of IBM technical contributors worldwide.

#### Leader Application Developer

Jan 2020 - May 2021

- Led a cross-functional team of 6 developers building an Office Workflow Management Application for the Ministry of Justice, digitising processes across 50+ offices.
- Managed the full software development lifecycle from requirements to deployment, delivering all milestones on time and within budget.

#### Application Consultant

Jul 2018 - Dec 2019

- Enhanced features for the IT Protocol application used by 1000+ Ministry of Justice users.

- Gathered requirements and implemented solutions compliant with Italian government regulations and GDPR.

- **ACT Operations Research**

*Algorithm Engineering - Software Developer*

Rome, Italy

*Jun 2015 - Jun 2018*

- Developed optimisation applications for enterprise clients, reducing operational costs by 15-20%.
- Built a full-stack application for large-scale retail transport optimisation, reducing delivery times by 30% and fuel costs by 25%.
- Engineered a Java Vehicle Routing Optimizer using Genetic and Meta-heuristic Algorithms, processing 500+ delivery routes daily.

## TECHNICAL SKILLS

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- **Programming Languages:** Python, Java (Quarkus), Golang, TypeScript/JavaScript, SQL, GraphQL, NoSQL
- **Cloud & DevOps:** AWS (EKS, S3, EC2, IAM, CloudWatch), Terraform, Tekton, OpenShift, Kubernetes, Docker, Helm, Istio, Jenkins, Git, CI/CD
- **Databases & Search:** MongoDB, Elasticsearch, SQL databases, Data modelling
- **Frameworks & Libraries:** Quarkus, React, Angular
- **AI/ML:** Generative AI, NLP, Chatbot Development, Document Summarisation

## EDUCATION

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- **Sapienza Università di Roma**

*Master of Management Engineering, Problem Solving and Data Mining; Grade: 108/110*  
*Bachelor of Management Engineering*

Rome, Italy

*Jan 2013 - May 2015*  
*Sep 2009 - Dec 2012*

## CERTIFICATIONS

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- **AWS Certified Solutions Architect – Associate**

*Feb 2021*

## ADDITIONAL INFORMATION

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- Familiar with data protection regulations (GDPR) and compliance requirements
- Languages: English (Fluent), Italian (Native)
- Open to relocation to the UK (Halifax/Manchester) with family visa options