

# Ugo Matrangolo

Senior Software Engineer

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## Profile

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Senior software engineer/Team leader with 10+ years of experience in designing, developing and testing complex systems. I have experience in driving a project from its inception to the final release always managing risks, priorities and resources without trading on overall quality. With a strong attitude in problem solving and quality driven, I'm eager to and capable of quickly mastering new technologies to foster innovation inside my team. I'm always open to new challenges in order to broaden my experience and to make the difference.

## Since June 2010 to present day

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### Senior Software Engineer, GILT, Dublin, Ireland ([www.gilt.com](http://www.gilt.com))

GILT is a major player in the flash sales market in USA. We provide discounted merchandise through sales starting each day at noon. Our peculiar business model requires an infrastructure capable of handling very high load: some of our internal services are able to get more than 150K RPM at peak time. I'm one of the engineers working on the backend infrastructure where we iterate over existing services and designing new ones to fulfill extra functional requirements or new business needs. Our architecture is similar to Amazon: a set of small services each one focused on a single domain problem that are aggregated and reused to build all our web sites. We use **Scala**, **Java** and **Ruby**, a lot of OS technologies (**SBT**, **Play 2.0**, **RabbitMQ**, **SOLR**, **Rails**, **GIT**, etc.) on top of various noSQL solutions (**MongoDB**, **Voldemort**).

- Key engineer during the development of the Home web site ([www.gilt.com/home](http://www.gilt.com/home)) belonging to the GILT family. Designed and implemented most of its backend services and devised most of the structural patterns that were used during its implementation.
- Owner and maintainer of various core backend services used across the organization to build all our web sites.
- Part of the team that introduced a SOLR based search service in the GILT infrastructure that is now used by our customers to explore our sales and products.
- Core engineer behind an effort to unify all our backend/frontend technologies under a well defined set of frameworks/tools.

## Since February 2008 to June 2010

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### Developer Expert, ChangingWorlds/AMDOCS Interactive, Dublin, Ireland

ChangingWorlds provides innovative solutions for mobile content discovery and personalization that are used worldwide by millions of subscribers to enhance their mobile internet navigation experience. I was a Developer Expert in their R&D team working on our flagship personalization system. We heavily leveraged **Java**'s support for **multithreading**, Oracle's **Coherence** as a distributed data cache on top of big data tools like **Apache Hadoop**, **Cassandra** noSQL store tying everything together with **Spring** framework as our IOC container.

- Team leader/SCRUM master (uncertified) leading small to medium (5 engineers) teams.
- Main architect and lead developer of our internal security framework that provides SSO and Authorization services to all our application (got a recognition award for this)
- I was one of the lead developer and designer in the realization of our personalization solution. I was in charge of various critical subsystems of the product (API/Web Services design and implementation, core data structures, performance analysis and optimization).
- I led an effort to adopt a series of strong quality metrics inside our team that finally resulted in improved long-term maintainability, an optimal overall quality of the product and served as a target for other projects.
- I have gained a reputation of an excellent programmer who creates superior quality code with strong analytical and creativity skills.
- Decisively contributed to the design, development and final delivery of products that are currently used by millions of users worldwide.

## **Since October 2006 to February 2008**

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### **Senior Software Engineer/ Team leader, Herzum Software, Cosenza, Italy**

Herzum Software is an international consulting company specializing in IT strategy, enterprise architecture, software integration and Agile software development. During my stay I was a senior engineer, functional designer and platform developer in a project aimed to create ERP software for the second largest pharmaceutical European vendor. We adopted an **Agile/XP** development methodology and **SOA** based architecture backed by various **Java/JEE** technologies.

- Factory architect in charge of the setup and the maintenance of our internal software development process based on **Maven, Continuum** and **JIRA**.
- Team leader/SCRUM master (uncertified) in charge of most of the critical business functionality of the project and with the responsibility of mentoring junior team's member and keeping track of the overall quality.
- Refactoring of the concurrency scheme of the application that resulted in better performance and more reliability. Some critical race conditions that plagued the system for months were spotted and fixed restoring the confidence of our customers.
- As a platform developer I contributed in the design and development of our internal execution container. My main contributions were a complete **JNDI** implementation, the integration of a **JMS** engine and a full ESB module that was the foundation of each integration use cases with third party software.

## **Since July 2005 to October 2006**

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### **Software Engineer, ALTRAN CIS, Milan, Italy**

ALTRAN is an international consulting company specializing in the banking and insurance sectors. As a software developer I was involved in the design and implementation of a **JEE** based web application for one of the largest insurance company in Italy.

- Performed a major refactoring of the entire application in order to extend its capabilities and improve the overall quality of the design and code.
- Developed complex tasks to automatically check the consistency and the correctness of the application data.

## **Since September 2004 to July 2005**

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### **Functional Analyst, Siemens Medical System/CEFRIEL, Milan, Italy**

Worked as a functional analyst in a project aimed to analyze and formalize using UML all the available health care mobile applications in order to exploit their commonalities and improve their business work flow. The outcome of this work was used as the foundation to start further development of Siemens's mobile health care applications.

## **Since May 2003 to September 2004**

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### **Researcher, ICAR-CNR Institute for High Performance Computing and Networking, Cosenza, Italy**

During my stay at ICAR-CNR I was involved in various multi disciplinary research efforts on distributed systems, mobile systems, very large database processing and XML.

- Designed and developed various software prototypes to validate research efforts and business opportunities using mainly **Java/JEE** and **C/C++**.
- Developed in **C++** a complete framework for sharing and querying XML documents on a peer-to-peer network using a DHT routing algorithm.
- Created a mobile application to analyze and to query very large OLAP data bases using an hand held mobile device.
- Decisively contributed to the inception and to the writing of various scientific papers published on various national and international conferences.

## Technical Skills and Competencies

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I spent more than 10 years designing, developing and testing JSE/JEE based applications. I have work experience with most of the Java related technologies and specifications. I'm interested in scalable and high performance architectures in a problem domain that requires efficient processing of very large datasets. I'm a fan of the XP programming and of the TDD approach to in particular.

<b>Java</b>	10+ years of experience in the <b>JSE/JEE</b> and related technologies. Strong command of <b>multithreading</b> programming using Java's <b>concurrency</b> idioms. Work experience with the majority of the JCP standards ( <b>JMS, JPA, JAX-RS, JAX-WS, JNDI</b> , etc.) and their reference implementations.
<b>Scala</b>	2+ years of work/personal experience with Scala in the development of high scalable services. Fluent with <b>SBT, ScalaTest, Specs2</b> and all the major tools used in the Scala eco-system.
<b>Ruby</b>	Work experience with Ruby for the implementation of small automation utilities.
<b>BASH</b>	Good command of the Bourne Again shell in the creation of build automation scripts, testing tools and deployment utilities.
<b>Spring</b>	3+ years of work experience designing and developing complex layered applications using all the core functionalities offered by Spring ( <b>IOC, AOP, data access support, testing support</b> ). I have also strong command with <b>Spring MVC</b> and <b>Spring Security</b> .
<b>Oracle's Coherence</b>	2+ years of experience in using Coherence to query and perform aggregation tasks on very large data grids.
<b>ORM/ Hibernate</b>	2+ years of experience in working with ORM technologies and the Hibernate framework in particular using both its native API and its <b>JPA</b> implementation.
<b>Web Services</b>	Good experience in designing and developing complex web services using both the <b>SOAP (JAX-WS)</b> and the <b>REST</b> approach ( <b>JAX-RS</b> ) with industry standard ws stacks ( <b>Apache CXF, Spring Web Services</b> ).
<b>Agile</b>	4+ years of experience in applying Agile methodologies, <b>SCRUM</b> in particular. I was SCRUM Master (uncertified) for various small to medium (5 developers) projects. I'm able to follow and drive the entire process starting from the product backlog assessment using <b>User Stories</b> , the <b>sprint planning</b> , with task estimation and <b>"poker" planning</b> , the sprint burn-down chart and the final <b>sprint retrospective</b> .
<b>XP Programming</b>	Strong command of all the various XP programming practices: <b>TDD</b> (using <b>JUnit</b> and <b>Mockito</b> ), <b>continuous refactoring</b> , <b>code coverage analysis</b> , <b>continuous integration</b> and <b>code reviews</b> among others.
<b>Http/REST</b>	Good work experience with the design and implementation of distributed systems interacting with the Http application protocol. Good knowledge of the <b>REST architecture</b> principles for designing scalable and highly available systems.
<b>Others</b>	XML, XSLT, Eclipse, Jetty, Windows, Linux/Free-BSD/Unix, JIRA, ANT, Maven, SVN, GIT, Mercurial, PHP, Joomla, Clover, EMMA, vim, Emacs, Guice, Scala, functional programming, algorithms, computational complexity.

## Education

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- **Postgraduate Master in Information and Communication Technology**  
CEFRIEL, *ICT Center of Excellence for Research, Innovation, Education and Industrial Lab partnership*  
Milan Polytechnic, Italy  
Thesis title: *"Analysis and modeling of the activities flow in a home-care scenario"*, Final mark: 107/110
- **MS in Software Engineering**  
University of Calabria, Rende (CS), Italy  
Thesis title: *"Data access, indexing and performance analysis in Hand-OLAP, a Java based system for handling compressed OLAP views"*, Final mark: 108/110

## References

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Available on requests.