MANUEL MASTROFINI

Experienced Software Engineer skilled in architectures and design, driving transformative shifts. Proven history shaping and capitalizing on software innovation. Passionate about cutting-edge tech, including Generative AI. Broad background in knowledge sharing, fostering progress and tech innovation.

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WORK EXPERIENCE

Transition consultant at GBSoft   *06/2022 - Present (Italy)*

Market leader in the Construction Funds (Casse Edili) sector (50%+ of market share)

➜ **Mentoring the CEO, and the shareholders** through the acquisition of the competitor CFP Informatica and subsequently orchestrating its merger with GBSoft. The most relevant activities I am conducting include:

- ◆ Acting as CTO pro tempore since 09/2023
- ◆ Defining, planning, executing and monitoring a comprehensive **transition strategy, encompassing releases, initiatives, software architecture, IT evolution, processes, methodologies and skills**.
- ◆ Facilitating **knowledge transfer**, ensuring the smooth integration of acquired resources and capabilities.
- ◆ **Establishing and managing the joint venture** "Disciplina" between GBSoft & LAST Horizon, driving the innovative development of a new and innovative software targeting security for construction workers.

CTO & Partner at CFP Informatica   *01/2017 - 06/2022 (Italy)*

Software company operating in the Construction Funds sector (15% of market share).

➜ **Governed** the **transformation** and evolution of the software application portfolio, from conceiving the **innovation plan** to the company 's sale to GBSoft in 06/2022, also serving as temporary CEO (2021-2022).

➜ Led **Agile project management**, **financial & strategic planning**, **team and innovation management**.

➜ Hands-on participation to design&dev of core software components for **big data, mobile and cloud projects**.

➜ This is an excerpts of main activities:

- ◆ Definition of the **transformation plan** for the entire **software portfolio from monolith to microservices** (originally around 500.000 lines of heterogeneous code, now around 1000 microservices, including a home-made enterprise-level development framework).
- ◆ Progressive **execution** of the transformation plan and **continuous integration and deployment with smooth and progressive switch-over** (feature by feature).
- ◆ Led the highly successful project of Monet, a **big data software solution** targeting tax evasion in the construction sector, involving the integration of data from multiple heterogeneous sources.
- ◆ Led the highly successful project of Edilapp, a **nation-wide smartphone application** to enable construction workers (600.000-800.000) to access their history of payments, presence on construction sites, and interact and chat with the construction funds.
- ◆ Definition and execution of the **migration of the legacy IT infrastructure to a hybrid cloud infrastructure** (2.5 years), including the management and recovery from the critical situation of the legacy infrastructure being hacked while the migration was in progress.

CTO & Founder at LAST Horizon   *01/2014 - Present (Europe)*

In parallel to the aforementioned projects, I have carried on more challenges with different teams and partners

➔ Technical Manager of 2 large Horizon 2020 project (about 20 partners and 10M€ total budget each):

  ◆ **"SYSTEM"** on behalf of RESI Spa (budget 750k€, 2018-2022).

  ◆ **"NOSY"** on behalf of RESI Spa (budget 480k€, 2016-2018).

➔ My main duties included:

  ◆ Planning and executing audits, reviews and interactions with the European Commission to discuss the project progress and goals achievement.

  ◆ Actively contributing to the deliverables: I co-author around 30 deliverables (documents, prototypes and artifacts) across the two projects and I led 7 of them.

➔ Co-founder and Technical Manager of the project Appscolta for the municipality of Nettuno (Rome, 2020-2021).

➔ Software consulting and development on web and mobile technologies in Java, C#, Javascript, Kotlin, C++, Python, relational database and nonrelational database and diverse frameworks (Spring, Angular, .NET, Django…) and cloud environments (AWS, Microsoft Azure).

Adjunct Professor at the University of Roma Tor Vergata   *10/2010 - Present (Italy)*

➔ I delivered courses that directly leveraged insights gained from hands-on involvement in industrial projects:

  ◆ "Software Construction" (5th year, 2019-present).

  ◆ "Advanced Software Engineering and Web Services" (4th year, 2012-2018).

  ◆ "Software Engineering and Web Design" (3th year, 2012-2018).

➔ Nurtured future engineers by sharing practical knowledge and fostering a deep connection between classroom education and industry projects. My students continue to engage with me and express their appreciation.

Intern at the Fraunhofer Center   *10/09-10/10, 06/12-04/13 (College Park, MD, USA)*
for Experimental Software Engineering

➔ **Improving NASA verification, validation and certification process for software and hardware via quantitative methods**, with actionable results reported in 2 NASA Technical Reports, one including a **proposal for standard modification**

  ◆ 12th Annual Meeting of the Nasa Office of Safety and Mission Assurance (2012, https://ntrs.nasa.gov/citations/20110023454)
  ◆ Inspections for Systems and Software (2011, https://ntrs.nasa.gov/citations/20110023454)

➔ Received the **NASA Group Achievement Award** for the "immediate value [delivered] to NASA missions".

SKILLS

Hands-on	**Process & Methodology**	**Management & Leadership**
Software Architecture & Design	Requirements Elicitation	Software Life Cycle Management
Software Framework & Tools	Requirements Specification	Innovation Management
Microservices	Research & Development	Project management
Cloud Platforms (AWS, Azure)	Software Transformation	Strategic Planning
Generative AI (GPT4.0 & Copilots)	Knowledge Transfer	Quantitative Decision Making
Multiple programming Languages	Continuous Improvement	Cross-Functional Team Leadership

EDUCATION

Autonomous Learning   *Continuously*

Literally hundreds of online courses on Programming Languages & tools, Azure, AWS, CI/CD tools, Security, AI, Project and People Management…

PhD - Software and Systems Engineering   *10/2010-09/2013*

University of Roma Tor Vergata

➔ Thesis: "Software Development Process Enhancement: a Model For Quantitative Decision-Making"

➔ Developed at the Fraunhofer Center for Experimental Software Engineering in collaboration with NASA (1 year in College Park, MD, USA) and MBDA Italia (5 months)

➔ Supervisors: Prof. Giovanni Cantone, Dr. Forrest Shull

MSc - Computer and Automation Engineering   *03/2008-09/2010*

University of Roma Tor Vergata

➔ Thesis: "Improving system and complex programmable hardware inspections in critical environments"

➔ Final grade: 110/110 cum laude

➔ Developed at the Fraunhofer Center For Experimental Software Engineering in collaboration with NASA (College Park, MD, USA)

OTHER ACHIEVEMENTS

➔ **NASA Group Achievement Award** *(Award, 2012) NASA - National Aeronautics and Space Administration* — "Outstanding effort in enabling 0SMA's Software Assurance Research Program to advance the state of software assurance practice and provide immediate value to NASA missions" — Awarded For the activities at the Fraunhofer Center For Experimental Software Engineering (College Park, MD, USA)

➔ **Sebastiano e Rita Raeli" Master's Degree Award** *(Award, 2010) University of Roma Tor Vergata - Award for the best graduates of the University*

➔ **Enhancing the System Development Process Performance: a Value-Based Approach** *(Publication at Incose International Symposium, 2014,* https://doi.org/10.1002/j.2334-5837.2012.tb01345.x*)*

➔ **Mobile Apps Development: A Framework for Technology Decision Making** *(Publication at MobiCASE: Mobile Computing, Applications, and Services, 2012,* https://doi.org/10.1007/978-3-642-36632-1_4*)*

➔ **Understanding Measurement and Practical Implementation of GQM** *(Certification, 08/2010) Fraunhofer Center for Experimental Software Engineering -* Framework for quantitative decision making.

HOBBIES AND INTERESTS

➔ Partner of TopForGrowth, a Non-profit fostering research dissemination, leadership evolution, and human-centric environments in the digital age.

➔ Interacting with nature and with animals, especially dog | Role Playing Game | Eating and tasting | Learn things about the universe