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# INTERVIEW WITH PHD FLAVIO TONETTO

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## Short-bio

Flavio Tonetto graduated in Physics at the University of Trieste in May 1996 and obtained a Ph.D. in Physics at the University of Trieste in January 2001. He completed his training with an Executive MBA at the Bologna Business School (BBS) in 2010. He began his experience in the world of consulting in Milan as an Accenture employee (formerly Andersen Consulting) in 1999, where he gained significant experience in planning and control in Coca-Cola and in the design of IT systems in Sanpellegrino-Nestlè. He founded Sinergia Consulenze SRL on January 10, 2005 together with the current partner Massimiliano Londei.

## How long have you been in the world of consulting and what skills did you learn?

I began working as consultant in 1999. Those were the years in which technological acceleration was becoming evident. The large consulting firms were therefore looking for young people with strong ability to learn quickly rather than specific technical skills. Skills that I had honed thanks to my studies in physics and that brought me closer to the business world: implement a BPI (business process improvement) project is simply a combination of organization and technology, sometimes innovation.

## **What inspired you to found Sinergia Consulenze SRL and how long have you been doing so?**

There were 2 important elements that led me to the creation of Sinergia. The first one was the desire for freedom. In a large consulting firm, you are continuously fighting both for professional choices and personal life, and this is a waste of time. The second one was the desire to make something of my own that could survive after me.

To achieve this goal, it is necessary to bring together different skills, which is exactly "Sinergia".

With the advent of Industry 4.0, the need to increase skills became more and more important. This led me to build partnerships with universities and research teams: after 20 years from my Ph.D., I started again to work on R&D projects.

## **What projects do you work in Sinergia in collaboration with Università Politecnica delle Marche?**

The research team of UNIVPM involved in our R&D is the VRAI Vision, Robotics and Artificial Intelligence research group, hosted in the Department of Information Engineering. My vision is that AI can boost BPI projects in all vertical industries and especially for SME leading to better performances and flexibility.

The most significant examples range from predictive maintenance to metric and not

metric quality detection, to decision support systems through AI.

Our last project is DeepReality, funded from the European Union's Horizon 2020 research and innovation programme through the XR4ALL project.

## **What is your proposed new XR solution?**

DeepReality is addressed to junior and experienced developers aimed to develop XR applications using Unity. The proposed solution involves the creation of a unity package, which will install an additional component for the development platform. It will contain the basic structure of an XR application that can be used on both Android and iOS smartphones and with adaptations also on generic end users. This component will allow developers to speed up the development of XR applications in two different ways: firstly, using the neural networks directly in the final application to obtain dynamic content within the same at runtime; secondly using the neural networks within unity to create content in a faster and simpler way for developers in order to allow to increase the range of XR applications available.

## **What are you working on this project now?**

We are testing the responsiveness of Barracuda (a neural network inference library), AR Foundation (a package that acts as an interface between Unity and platform-specific AR libraries) with different YOLO algorithms. YOLO (an abbreviation for the term 'You Only Look Once') use convolutional neural networks (CNN) to detect objects in real-time. The

challenge is to provide a reliable and stable solution to execute both Barracuda and AR Foundation in parallel with acceptable performances on different iOS and Android devices.

**How has the pandemic impacted the evolution of this project?**

The pandemic had no effect on operations: we were already used to virtual meetings. However, our commitment has strongly increased, because we were, and we are, sure that the spread of AR/VR solutions is accelerating.

**In your opinion, how do you think it will take for the integration of your solution both in the consumer electronic and Industry 4.0 scenario?**

Consumer electronic is actually ready for the integration of our solution on high performance devices. It means that in 12-18 months it will be available also on mid performance devices. For industry there are other challenges: starting from egocentric vision to wearable solutions for augmented operators. I'm sure we will soon see some interesting hardware solutions for our applications.

**What is the best tip you have ever received or would give to a student who is approaching this Industry 4.0 revolution?**

If you do not like studying, forget it. But if you always like to learn new things, it will be the most fun experience of your job! And if you have fun, you will be success.