

An Introduction to Computer Science for Fashion and Emerging Use Scenarios for XR

Course Description

In the present day, new media technologies like Augmented Reality, Virtual Reality and Mixed Reality are increasingly taking up space in our everyday life. Their innovative features allow users to have incomparable experiences at the edge between reality and virtuality, which makes users feel like the gap between physical and digital is not that wide anymore. If it is true that the physical and the digital worlds are more and more merging into each other, it is also undeniable that such a change in the way we use technology requires us to know something on its functioning, on its applications, and its risks.

This course wants to provide students with an overview of the working principles of Computer Science, while offering an insight into the contexts where such technologies are emerging. This knowledge is necessary to understand the rise of AI, XR and digital tools in the field of Fashion.

The course is structured in 5 lectures (2 hours each) and will include:

- Theoretical concepts, interactive demos, practical sessions, and surveys on Computer Science;
- A brief history of XR and an overview in its current uses in Fashion and other fields;
- A short tutorial on how to design a 3D virtual showroom on Blender;

- **Lecture #1: Introduction and background - Online**
 - Course outline and learning outcomes;
 - Computer science history: from where we came from and where we are;
 - Computer science key concepts: elaborator architecture, computation, programming;

- **Lecture #2: Take advantage of Computer Science - Online**
 - Understanding Information Technologies;
 - Introduction to Algorithmic reasoning;
 - Introduction to multimedia data;

- **Lecture #3: Introduction to AI for Fashion - Online and in Presence**
 - Basics definitions of Artificial Intelligence (AI);
 - Modern application of AI for Fashion;

- **Lecture #4: An overview of the history and XR and its uses - In Presence**
 - Brief history of XR and its rise in popularity;
 - Everyday Life and XR: a change in consumption habits;
 - Expectations and use scenarios for the future of XR: some hypotheses;

- **Lecture #5: XR and the Fashion Industry – In Presence**
 - An overview on current uses of XR in Fashion;
 - How to design VR and AR for Fashion: an overview of tools for 3D modeling;
 - Let's design a basic 3D Virtual Showroom on Blender!



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Crash Course Area: Computer Science

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