

FEDERICA BUCCHIERI

iOS Software Engineer

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WORK EXPERIENCE

iOS Software Engineer

KRNL, Milan

📅 Nov 2023 – Now

- 🛠️ Swift, SwiftUI, UIKit, Xcode, Firebase, TCA, VIPER, Combine, Realm
- Developed iOS app features using **Swift**, **SwiftUI** and **UIKit**, ensuring a smooth and intuitive user experience and performed extensive unit testing and debugging
 - Optimized app architecture using **The Composable Architecture**, **VIPER**, and **Combine**, which reduced code complexity by 30% and increased scalability for future features.
 - Collaborated with cross-functional teams to reduce feature delivery time by 20%.

Gameplay Programmer

3DClouds, Milan

📅 Sep 2022 – Nov 2023

- 🛠️ C++, Unreal Engine (4 & 5), Blueprints, Visual Studio
- Contributed to the development of multiplatform games, including *"Paw Patrol Grand Prix"* and *"Transformers: Galactic Trials"*, enhancing gameplay features and player experience.
 - Developed complex gameplay features within **Unreal Engine 4 and 5** using **C++**, focusing on skills and weapons systems, aiming mechanics, AI behavior, and tech animation.
 - Collaborated with a cross-disciplinary team of designers, artists, and producers to ensure seamless integration of gameplay features.

Research Intern

Inria Saclay, Paris

📅 Mar 2022 – Aug 2022

- 🛠️ Data Visualization, Unity, C#, User research, UX Design
- Conducted a **research study** titled *"Situating Visualization in Motion for Videogames"*, analyzing the impact of motion factors on **data visualization** readability and aesthetics.
 - Designed, implemented, and tested *"RobotLife"*, a first-person shooter developed in **Unity with C#**, focusing on gameplay mechanics and user experience.
 - Published and presented two posters at data visualization conferences, and contributed as second author to a **journal article**.

EDUCATION

Double Master's degree in Human-Computer Interaction & Design

Politecnico di Milano & Université Paris-Saclay

📅 grade: 110/110 L

📅 Sept 2020 - Sept 2022

Bachelor's degree in Computer Science Engineering

Politecnico di Milano

📅 grade: 99/110

📅 Sept 2017 - Sept 2020

MENTORSHIPS

Ubisoft Develop Program

Ubisoft Milan, Milan, IT

🛠️ C++, Visual Studio

📅 2023

Mentorship opportunity offered by Ubisoft, that consisted in a technical challenge with a strong focus on clean code, reusability, memory management and design patterns principles. Under the guide of a Ubisoft expert, I designed and developed an infinite scroller game using modern C++. This projects build upon a Ubisoft's API. I authored a detailed technical documentation for the project and presented it to a panel of Ubisoft specialists.

PUBLICATIONS

User Experience of Visualizations in Motion: A Case Study and Design Considerations

Journal Article, IEEE

Lijie Yao, Federica Bucchieri, Victoria McArthur, Anastasia Bezerianos, Petra Isenberg

📅 2024

Situating Visualization in Motion

Poster, EuroVis

Federica Bucchieri, Lijie Yao, Petra Isenberg

📅 2022

Visualization in Motion in Video Games for Different Types of Data

Poster, Journée Visu

Federica Bucchieri, Lijie Yao, Petra Isenberg

📅 2022

SKILLS

Languages: Italian (Native), English (C1 - Professional), French (A2)

Programming Languages: Swift, SwiftUI, UIKit, TCA, Combine, VIPER, C++, C#, Python, Java, JavaScript, SQL, MySQL

Frameworks: Blueprints, Realm, Vue.js, Nuxt, Node.js, HTML, CSS, Vuforia

Tools: Xcode, Unreal Engine 4 & 5, Unity, Visual Studio, Firebase, Figma, Jira, Mixpanel, PyCharm, Jupiter Notebook

Version Control: GitHub, Bitbucket, Perforce