

# Emmanuele Villa

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## Summary

Senior Technical Consultant and cross-platform software architect with 13+ years of experience delivering enterprise-grade mobile, TV, wearable, and automotive applications. Expert in native frameworks, Kotlin Multiplatform, React Native, Xamarin, and Unity3D. Experienced in designing scalable CI/CD pipelines, maintaining high code quality, and mentoring distributed engineering teams. Passionate about AI, PCG, and quantum computing, with personal projects showcasing innovative and experimental applications.

## Dev Experience

### Senior Technical Consultant

**Fincons Group, May 2023 - Present**

- Prototyping agentic AI workflows across the full development lifecycle, from requirement refinement and architecture generation to LLM-assisted PR review, automated test case generation, and intelligent release note summarization, reducing manual overhead in pre- and post-release processes.
- Architected and led the RTE Radio mobile application (Ireland's National Broadcaster) using Kotlin Multiplatform (KMM) and Jetpack Compose, achieving 30% code reuse while maintaining native UX across Android, iOS, Car, and Wear platforms.
- Designed, implemented, and managed a full CI/CD pipeline using GitHub Actions, Fastlane, and Maestro, integrating static analysis, linting, unit/UI tests, and AI-assisted pre-commit validation; achieved 40% reduction in release defects.

### Technical Consultant

**Fincons Group, May 2020 - May 2023**

- Directed architecture and implementation of RTE mobile and CTV platforms, integrating Flux/Redux design across Android, iOS, and ReactJS, achieving consistent feature parity and 30% shared logic reuse.
- Mentored a distributed engineering team of 10+ developers, introducing architecture patterns, code review standards and test automation practices that increased team velocity by 25% and reduced post-release issues by 30%.

### Senior Mobile Developer

**Fincons Group, May 2017 - May 2020**

- Led full lifecycle development of Publitalia's advertising sales platform using React Native and Redux, improving data entry accuracy and workflow speed across 3 business units.
- Rebuilt and optimized Eni's MyMulticard mobile app using Xamarin, ReactiveUI, and Rx patterns, reducing response times by 60% and improving maintainability through modular architecture.

### Mobile Developer

**Fincons Group, Jan 2015 - May 2017**

- Developed and maintained OTT applications for Sky Germany, Sky Online, and Sky Spain using Xamarin Native, integrating DRM streaming, offline playback, Chromecast, and multi-account authentication; supported >500K active users.
- Enhanced Jenkins CI/CD pipelines by configuring build jobs and automating regression tests, reducing release failures and improving deployment consistency across multiple platforms.

### Unity3d Developer

**Mixel, Sept 2012 - Jan 2015**

- Designed, developed, and published cross-platform mobile games for Android, iOS, and Windows Phone using Unity3D; accumulated 10K+ downloads and positive performance reviews.
- Contributed to the Genetic Algorithm Artificial Intelligence for the porting of the Magnifico board game to Desktop and Tablet platforms, available on Steam

## Speaking

### Droidcon Turin

**2025**

- Presented "Post-Quantum Cryptography with Kotlin Multiplatform", demonstrating a Kyber-based client/server architecture built entirely in KMP.

### Fincons Group — Internal Tech Talks

**2024 - Present**

- Delivered company-wide sessions (2K+ employees) on agentic AI adoption (3 sessions), quantum computing fundamentals, and code review best practices for cross-team engineering audiences.

## Teaching Experience

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### Teacher

**U3 Carate Brianza, Sept 2024 - Present**

- Designed and delivered 4 courses to 100+ adult learners: Artificial Intelligence (2024–2025), History of Computers (2025–2026), Dungeons & Dragons and Worldbuilding (2025–2026), and History of Science (2026–2027).

### Online Course Lecturer

**Sky Clouds Academy, Jan 2023**

- Produced two professional courses: Git Mastery and Quantum Computing Foundations, totaling 30+ hours of content for online learners.

## Personal Projects

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- **Kyber-KMP**: Post Quantum Cryptography client/server architecture in KMP.
- **WaterPeePoop**: Jetpack Compose + Room Android app tracking daily hydration and nutrition metrics.
- **Renshuu Widget**: A widget-only app that connects to Renshuu to show your Japanese learning progress.
- **Flappy AI**: A Flappy Bird clone where you play against a genetic algorithm neural network coded from scratch.
- **Dungeon VR**: VR game with map editor with a [Goal Oriented Action Planner AI](#), built for Oculus Quest 2.
- **WitcherGL**: A C++ OpenGL project that mimics witcher senses using GLSL shaders.
- **Arrow**: A metroidvania 2D platformer game in Unity3D, available on itch.io.
- **A worm's way out**: A puzzle game made in C with raylib, available on itch.io.

## Skills

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- **Languages**: Kotlin, Swift, TypeScript, C#, Python, Java, C/C++
- **Frameworks**: Kotlin Multiplatform, Jetpack Compose, React / React Native, Xamarin, Unity3D, raylib
- **Platforms**: Android, iOS, tvOS, watchOS, Android Auto, Oculus Quest
- **Architecture**: Clean Architecture, MVVM, MVI, Flux/Redux, Reactive/Functional, SOLID
- **AI/ML**: Azure AI Services, Genetic Algorithms, Neural Networks, Procedural Content Generation
- **Quantum Computing**: Qiskit, Post-Quantum Cryptography (Kyber), Quantum Algorithm Design
- **CI/CD**: GitHub Actions, Jenkins, GitLab CI, Fastlane, Maestro, automated testing
- **Leadership**: Agile/Scrum management, code review culture, developer mentoring, cross-team coordination

## Education

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### BA in History

**2025 - present**

Università degli Studi di Milano, Specialization in Medieval Studies

### MSc in Computer Science

**2021 - 2024**

Università degli Studi di Milano, Specialization in Game Programming

110/110 cum laude, with a thesis on "Procedural Content Generation with Quantum Algorithms"

### BSc in Computer Science

**2008 - 2012**

Università degli Studi di Milano, Specialization in Applied Computer Science

97/110, with a thesis on "Development and optimization of a videogame with Unity3D"

## Certifications

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- **Versant English C1** 2025
- **Scrum Developer** 2025
- **Azure AI Engineer Associate** 2025
- **Japanese Language Proficiency N5** 2025
- **IBM Quantum Challenge** 2024
- **Secure Coding OWASP** 2018

## Additional

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- **Publications**: Sequence [A262260](#) in the Online Encyclopedia of Integer Sequences.
- **Languages**: Italian (Native), English (C1), Japanese (A2).
- **YouTube**: 2.3K subscribers; short technical videos and mini-courses on AI and quantum fundamentals.
- **Twitch**: Light live-coding sessions demonstrating development workflows and problem-solving.
- **Other hobbies**: Videogames, Ant Keeping, Dungeons & Dragons.