Alberto Valdes Rey

Biomedical Engineer and Game Developer

Work Experience

Myelin-H *Cognitive Game Developer* Nov 2022 – Present

- Integrated gamification in cognitive assessments, enhancing patient engagement and accuracy.
- Launched 20+ annual minigames on Android and Windows to boost cognitive skills.
- Developed 4 multi-language sensor APIs for easy EMG, IMU, EEG, and audio integration in apps.
- Built a web portal for deep medical data analysis, aiding professionals in patient data interpretation.
- Produced remote monitoring apps with interactive gaming interfaces for Android and Windows.
- Led a game development team to create applications meeting medical standards and protocols.
- Innovated a Machine Learning pipeline for game controls using real-time bio-signals.
- Implemented a mobile online signal processing pipeline, elevating game interaction and performance.

Free2Move e-solutions *R&D Intern* Jul 2021 – Sep 2022

- Spearheaded ML initiatives, advancing tech innovation.
- Built predictive models for battery health monitoring.
- Led second-life battery study, resulting in a journal article and conference presentation.

Independent *Solo Game Developer* Jan 2019 – Present

- Juggled multiple game development projects.
- Integrated VR/AR for enhanced gaming experiences.
- Developed and shared educational content online.

Skills

Programming

Kotlin, C#, Python, Java, MATLAB, R, HTML, CSS, JavaScript, React

Tools & Technologies

Unity, Firebase, Photoshop, GIMP

Expertise

OOP, Game Development, Signal Processing, Software Testing

Languages

Italian (Native), Spanish (Advanced), English (Advanced), French (Basic)

Education

Alta Scuola Politecnica

Double Degree, Jan 2021 – Feb 2023. Multidisciplinary honour program.

Politecnico di Milano

Master's in Information Bioengineering, Sep 2020 – Oct 2022. Grade: 110/110 cum Laude.

Università degli Studi di Cagliari

BE in Bioengineering, Sep 2017 – Sep 2020. Grade: 110/110 cum Laude.

Publications

Health

1. "Exploring Emotional Responses in Virtual Reality Through Skin Conductance Signal". IEEE

2. "Exploring Transfer Learning for Ventricular Tachycardia Electrophysiology Studies". IEEE

Energy

1. "Second Life Batteries: Evaluation Methods, and Economic Assessment: Reuse, refurbish, or recycle". IEEE

Contact

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