



Mario Sanjuan Cantó

AI Research Engineer | AI for Education, Accessibility & XR

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🌐 LinkedIn Profile

📄 Personal Portfolio

ABOUT ME

Computer Engineering graduate focused on Artificial Intelligence, Machine Learning, Computer Vision and human-centred intelligent systems. Experienced in developing AI-powered and accessibility-oriented applications using Python, MediaPipe, Unity and data-driven methods. Strong academic record, international experience and practical background in applied AI research, assistive technologies, healthcare-oriented systems and real-time human-computer interaction. Motivated to grow as an AI Researcher, AI Engineer or Research Engineer.

WORK EXPERIENCE

Researcher in Artificial Intelligence

Dec 2025 – Present

Universitat Politècnica de València (EPSA) — Alcoy, Spain

- Worked on applied AI research projects focused on assistive technologies, cognitive health and human-centred intelligent systems.
- Evaluated Text-to-Speech and voice cloning models for potential use in accessibility and healthcare-related applications.
- Developed an eye-tracking communication system enabling ALS patients to control a virtual keyboard through gaze-based interaction.
- Contributed to a web platform for generating personalised cognitive exercises for Alzheimer's patients, improving functionality, user experience and AI-assisted exercise generation.
- Collaborated in multidisciplinary research environments involving software development, accessibility, healthcare needs and AI-based interaction.

Software Developer – Artificial Intelligence and Interactive Systems

Nov 2024 – Jul 2025

Universitat Politècnica de València (UPV) — Alcoy, Spain

- Developed real-time computer vision pipelines in Python using MediaPipe for facial landmark tracking, head movement estimation and motion analysis.
- Designed preprocessing and feature extraction workflows to transform visual input data into interaction signals.
- Integrated AI perception modules into Unity environments to support responsive human-computer interaction.
- Optimised latency and interaction behaviour for real-time accessibility-focused applications.
- Worked on the technical foundation of an educational application adapted for children with reduced mobility.

Coordinator – Interactive Technology Group

Sep 2024 – Sep 2025

Interactive — Official UPV Student Technology Group — Alcoy, Spain

- Coordinated a student technology group focused on interactive applications, XR systems and software prototypes.
- Managed project resources, defined technical objectives and planned development roadmaps.
- Supported members in designing and implementing software, interactive systems and prototype-based projects.
- Contributed as a software developer in the creation of technical solutions involving Unity, interaction design and immersive technologies.

XR Software Developer & Technical Mentor

Sep 2022 – Sep 2024

Interactive — Official UPV Student Technology Group — Alcoy, Spain

- Developed immersive simulation and interaction systems using Unity and C#.
- Designed virtual and augmented reality applications for educational and research-oriented contexts.
- Mentored new members in object-oriented programming, Unity development and interactive system design.

Mobile Development Instructor

CampusTEC - Servipoli · 50 hours — Alcoy, Spain

- Delivered practical workshops on mobile application development, UI logic, event-driven programming and basic software architecture.
- Guided students in building functional interactive prototypes using visual programming environments.

Feb 2024

Invited Speaker – XR Technologies

GameGen Conference / Universidad Rey Juan Carlos · 24 hours — Madrid, Spain

- Presented technical work on immersive interaction systems, simulation environments and extended reality applications.
- Discussed real-time interaction mechanisms, design challenges and performance considerations in XR development.

EDUCATION AND TRAINING

Sep 2022 – Jun 2026

BSc Computer Science Engineering

Universitat Politècnica de València — Spain

Academic focus: Artificial Intelligence, Computer Vision, Data Systems, Human-Computer Interaction and Software Engineering.

- GPA 9.1/10
- 17 honors distinctions
- 1,000+ internship hours in Artificial Intelligence and Computer Vision
- Final Degree Project: 10/10 with Honours distinction

Jul 2024

CERN Research Program – I2Planet

CERN — Geneva, Switzerland

- Worked in multidisciplinary teams to design technological solutions for complex scientific challenges.
- Applied data analysis, computational modelling and structured problem-solving methodologies.

Nov 2024

Erasmus+ Blended Intensive Program – XR Systems Development

LAB University of Applied Sciences — Lahti, Finland

- Collaborated in international teams to design and prototype augmented reality navigation systems.
- Focused on real-time interaction, system integration, user experience and XR-based software development.

Feb 2025

Python for Research Course

HarvardX · 36 hours

- Completed practical training in Python programming for data preprocessing, numerical computation and visualisation.
- Worked with NumPy, Pandas and Matplotlib for data manipulation workflows and basic model experimentation.

Jul 2025 – Aug 2025

Introduction to Data Engineering and Data Warehousing

IBM · 2 courses · 29 hours

- Studied the role of data engineering in supporting machine learning and AI systems.
- Covered data pipelines, data storage systems, data warehouses and large-scale processing workflows.
- Gained foundational knowledge of how structured data workflows support scalable AI applications.

Jul & Sep 2025

Database Systems: SQL, Relational & NoSQL Databases

IBM · 3 courses · 54 hours total

- Completed practical training in relational, SQL-based and NoSQL database systems.
- Worked with SQL querying, joins, subqueries, database management and relational data modelling.
- Covered NoSQL database concepts, MongoDB CRUD operations, Cassandra keyspaces and semi-structured data management.

Jul 2026

Embodied AI and Intelligent Systems Summer Program

Beihang University — Beijing, China

- Studied embodied and multimodal AI, computer vision, intelligent agents, perception and autonomous decision-making.
- Explored real-world AI applications through hands-on projects, research lectures and laboratory visits.

SKILLS

- **Programming:** Python, C++, C#, Java, SQL
- **AI/ML:** Machine Learning, Deep Learning, CNNs, model evaluation, feature engineering, data preprocessing
- **Computer Vision & HCI:** MediaPipe, facial landmark tracking, face tracking, head movement estimation, accessibility systems, human-computer interaction
- **Software & Tools:** Git, GitHub, GitLab, Docker, Linux, Unity
- **Data & Databases:** NumPy, Pandas, Matplotlib, PostgreSQL, MySQL, MongoDB

LANGUAGE SKILLS

- **Spanish:** Native
- **Catalan:** C1 – Proficient
- **English:** C1 – Proficient
- **German:** A1 – Basic, non-certified
- **Finnish:** A1 – Basic, non-certified

HONOURS AND AWARDS

Top University Entrance Score – Computer Engineering (UPV Campus Alcoy)

Achieved the highest admission grade among all students entering the Computer Engineering degree. Grade of 13.15/14.

Best Academic Record Award – BSc Computer Engineering, Year 1 (UPV)

Outstanding academic performance with a final average grade of 9.34/10.

Best Academic Record Award – BSc Computer Engineering, Year 2 (UPV)

Outstanding academic performance with a final average grade of 9.14/10.

Best Academic Record Award – BSc Computer Engineering, Year 3 (UPV)

Outstanding academic performance with a final average grade of 8.56/10.

ARA UPV Mention – High Academic Performance Programme

Awarded by UPV for academic excellence. Requirements include completing at least 25% of credits with Honours, maintaining a top-tier GPA, and certifying a B2 foreign language level.

PUBLICATIONS AND CONFERENCE CONTRIBUTIONS

Conference Paper / Oral Communication

Jul 2026

XIII Congreso I+D+i Campus d'Alcoi – Creando Sinergias — Alcoy, Spain

- Presented the paper “Web Platform Based on Personal Memories for Cognitive Stimulation in People with Mild Cognitive Impairment”.
- First author of a conference contribution published in the official proceedings of the XIII Congreso I+D+i Campus d'Alcoi.
- Work focused on a reminiscence-based web platform for cognitive stimulation in people with mild cognitive impairment.

BACHELOR'S THESIS

AI-Powered Accessible Educational App with Face Tracking in Unity

May 2026

Developed an AI-powered, accessibility-focused adaptation of the TELLA educational app using face tracking, computer vision and Unity, enabling children with reduced mobility to interact with learning games through head movements. Designed a webcam-based system with MediaPipe to detect facial landmarks, estimate head orientation in real time and convert movements into in-game actions, creating a low-cost, multiplatform and inclusive interaction solution.

 riunet.upv.es/handle/10251/236132