

Umberto Barzan

3D Developer

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Piazza Mercato, 18b – Villa Santina (UD)

Education

Higher Technical Diploma in IoT and Artificial Intelligence (EQF 5)

ITS AltoAdriatico - Amaro

11/2024 – present

Bachelor's Degree in Linguistic Mediation (L12)

Università Unimercatorum

2021 - 2024

High School Diploma in Mechanical Engineering

Istituto Tecnico Industriale "Alessandro Volta" - Trieste

2008 – 2013

Hard skills

3D & Real-Time Development:

- Unreal Engine 5 (Blueprint system, interaction logic, VR environments)
- VR development for standalone headsets (hand tracking, immersive interaction)
- Blender (modeling, UV mapping, asset preparation)
- Real-time scene setup and optimization
- Unity (basic scene development and AR experimentation)

Interaction & XR:

- Hand tracking systems
- Integration of device SDKs and XR toolkits
- Interactive environment design
- Media integration (360° video, immersive content)

Programming Background:

- Blueprint scripting (Unreal Engine)
- C#
- Python
- HTML, CSS, JavaScript

About me

I come from a technical background in mechanical engineering and IT, and over the past few years I've gradually shifted my focus toward 3D and real-time development. I enjoy working with Unreal Engine and Blender to build interactive environments and immersive experiences, especially in VR.

Alongside this, I have hands-on experience in computer vision and AI systems, which gives me a structured and problem-solving approach when designing interactive projects.

I'm curious, practical, and used to learning by building. I like combining logic and creativity, and I'm currently looking to grow professionally in environments where 3D, XR and real-time technologies play a central role.

Career history

3D & Unreal Engine Developer – Animandi

January 2026 – April 2026 - Udine

Main tasks and responsibilities

- Development of interactive VR environments in Unreal Engine
- Implementation of hand tracking and immersive interaction systems
- Integration of XR tools and standalone headset workflows
- 3D asset preparation and scene refinement using Blender
- Support in media integration and immersive content management
- Collaboration within creative and technical development processes

Computer Vision Developer – Visiofy srl

June 2025 – September 2025 - Udine

Main tasks and responsibilities

- Collaboration on real automated visual inspection projects for manufacturing industry
- Development and training of deep learning models for defect detection and segmentation
- Integration of industrial cameras (IDS, FLIR) and GenICam protocols
- Communication and control through PLCs and embedded systems
- Development of backend tools (Flask, ZMQ, Redis) and frontend web Sinterfaces (Tailwind, JavaScript)
- Management of data pipelines, image saving, logging and orchestration with Docker and Docker Compose
- Team work on a modular and scalable system for industrial AI applications

Ai & computer vision: YOLOv8, Anomalib, SAM, OpenCV, PyTorch, OpenVINO.
Datasets and images management.

Databases:

- SQL
- NoSQL

IoT & Automation:

MQTT, Grafana, NodeRed, OPC-UA, Industrial cameras/protocols basic knowledge.

Tools & Software:

- Docker (basic usage)
- Git
- AutoCAD
- Adobe Lightroom
- MS Office

Operating systems:

- Windows
- Linux

Soft skills

Responsible and reliable, I have coordinated people and activities independently, developing organizational and decision-making skills.

Motivated and determined, I have consistently tackled the transition from the technical sector to IT, focusing on continuous growth.

Adaptable and autonomous, I have worked in dynamic and multicultural environments, such as Australia and South America.

Communicative and punctual, I have managed relationships with clients and teams while always maintaining a clear and professional approach.

Certifications

Personal Data Protection: GDPR, Privacy & Security – AICA
04/2025 - ITS Alto Adriatico

General Training on Workplace Safety

02/2025 - ITS Alto Adriatico

Technical Manager for Vehicle Inspections – Centro Revisioni Interauto

2014 – 2016, 2017 – 2018, 2021 – 2024 - Trieste

Main tasks and responsibilities

- Execution of thorough vehicle inspections, ensuring compliance with standards
- Effective communication with clients and management of technical issues
- Supervision of junior members and organization of operational activities
- Installation of accessories and routine maintenance
- Administrative management: document filing, management of bureaucratic procedures and customer database updates
- Payment management: processing transactions via POS, cash management and daily reconciliation
- Office coordination: appointment scheduling, support in deadline management, archives and interface with certification bodies

Italian Teacher (volunteer work) - Associazione Arci

2021 – 2024 (Part-time) - Trieste

Main tasks and responsibilities

- Use of digital platforms for teaching and student management
- Creation of digital teaching materials and independent lesson management
- Use of digital platforms for online teaching, lesson management and student interaction
- Organizational support in association activities, including course programming and enrollment management

International Experience

International experiences – Australia and South America (2 years)

I lived and worked one year in Australia and one in South America, holding managerial roles in agricultural and tourism sectors. I developed key skills such as:

- personnel management and operational coordination
- problem-solving and autonomy in managing accommodation facilities
- intercultural communication in multicultural contexts
- resilience and adaptability in challenging and dynamic environments

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