Ilias Chrysovergis

Software Architect | Developer | Researcher

Passionate about science & technology and their impact on humanity. Creating solutions about real-life problems using cutting-edge tech.
artificial intelligence, metaverse, software architecture

iliachry@gmail.com
+30 6986 29 30 42
https://github.com/iliachry
https://www.linkedin.com/in/ilias-chrysovergis/
https://iliachry.github.io

AI & XR EXPERIENCE

Research Scientist — **DUTH**
Jun 2025 – Today — Contract, Alexandroupoli, Greece
Conducting research at Democritus University of Thrace on how AI and XR can be leveraged for systems thinking education.

Co-Founder/CTO — **QuimaXR**
Sept 2024 – Sept 2025 — Experimentation, Thessaloniki, Greece
An XR app offering immersive cinema experiences that deliver novel perspectives and storytelling approaches.

Founder/CEO/CTO — **Metatopia**
Nov 2022 – Sept 2025 — Thessaloniki, Greece / Nicosia, Cyprus
A metaverse studio building solutions for the 3D internet. Some projects of Metatopia were: (i) VR simulator for learning electric circuits, (ii) MR application for slot machines in collaboration with Kaizen/Betano, (iii) digital twin software for wireless communication systems, (iv) participation in consortia for various EU open calls.

Lead ML & XR Engineer — **CERTH/ITI**
Apr 2022 – Oct 2024 — Contract, Thessaloniki, Greece
(i) Lead the development of an AR "On-the-Job" facilitation toolkit for the construction industry. The toolkit consists of two mobile AR apps, one web server, one web app, and one HoloLens app. (ii) Worked on Optical Character Recognition for Greek documents. (iii)Wrote deliverables for Greek and EU funded projects. (iv) Technical Lead in the XR team of VARLAB.

Software Engineer (ML & VR) — **OramaVR**
Sept 2020–Sept 2022, Mar-Jun 2017 — Contract, Thessaloniki, Greece
(i) Worked on the development of a VR simulator for two surgery operations. (ii) Worked on the multiplayer functionality of the simulators. (iii) Worked on the integration of all data operations into the cloud. (iv) Built a VR recording and replay functionality and integrated it in the company's SDK, three sample apps, and one product. (v) Supervised the development of a DL algorithm for scoring cuts, tears, and drills in medical VR sessions. (vi) Co-authored two conference papers and two journal papers.

Machine Learning Engineer — **AUTH**
Apr 2020 – Aug 2020 — Full-Time, Thessaloniki, Greece
(i) Developed pre-processing and deep learning algorithms to analyze gyroscope and accelerometer data obtained from smart bands to detect the eating behavior of users. (ii) Developed a signal processing algorithm to detect in real-time the breathing rate of users using audio signals sampled from microphones.

Research Scientist — **University of Cyprus**
Sept 2019 – Mar 2020 — Full-Time, Nicosia, Cyprus
Conducted research on fundamental limits, advanced signal processing and machine learning techniques for wireless communications.

Software Engineer (VR) — **Greek Army**
Nov 2018 – Aug 2019 — Service, Thessaloniki, Greece
Took the initiative to propose, design and develop the first VR application for military infantry training in the Greek Army. Presented the simulation to generals, the chief of the Greek Army and the Deputy Minister of National Defense. Proposed a one-year plan for the project before completing my service. One year after its' beginning, the project had received a total funding of more than 30k Euros for equipment, the R&D continued and training of soldiers with the app had started.

OTHER EXPERIENCE

Co-Founder/CTO — **PestView**
Dec 2024 – Today — Experimentation, Thessaloniki, Greece
A cloud-based pest control management platform for scheduling appointments, monitoring pest activity, and utilizing operational data.

Lecturer — **International Hellenic University**
Mar 2025 – Today — Contract, Thessaloniki, Greece
Teaching the course Augmented & Virtual Reality at the MSc in Smart Environmental Sustainability.

Lead Full Stack Developer — **NTUA**
Nov 2024 – Today — Contract, Athens, Greece
Building digital twins in the Urban Water Management and Hydro-informatics Unit of the Civil Engineering Department of NTUA.

Lecturer — **Mediterranean College**
Oct 2024 – Sept 2025 — Contract, Athens/Thessaloniki, Greece
(i) Taught Game Behavior, Virtual Environment Development, Game Development, and Computer Graphics at the BSc in Computer Games Programming of the Department of Computing. (ii) Supervised six student's theses in game development, Unity machine learning agents, and blockchain (Ethereum/Solana chains).

Lead .NET Software Engineer — **Pragma-IoT**
Jun 2023 – Jan 2025 — Contract, Thessaloniki, Greece
(i) Lead the development of multiple plugins for Autodesk Revit and API services for storing/accessing/processing data from Revit. (ii) Wrote technical proposals for client projects.

SKILLS & COMPETENCIES

LLMs GPT, Gemini, Claude (Sonnet/Opus), Grok, DeepSeek, RooCode, Fine-tuning, OpenAI API, Amazon Bedrock
GenAI RAG, LangChain, Vector Databases, Prompt Engineering
Platforms Visual Studio, VS Code, Cursor, Unity3D, Blender, Azure, Arduino, Meta Quest, Docker, GitLab/GitHub/BitBucket, VPN Solutions, Figma, Expo, Google Colab, Overleaf
Programming Languages Python, C#, MATLAB, R, SQL, JavaScript, TypeScript, Java, C/C++
Frameworks Tensorflow, PyTorch, React, MUI, Next.js, Node.js, Three.js, Babylon.js, Cesium.js, Django, Flask, FastAPI, React Native, Express.js, TaliwindCSS, RestAPI, GraphQL, MQTT
Databases PostgreSQL, MySQL, MSSQL, Redis, MongoDB
Other Probability/Statistics, Information Theory, Optimization, Blockchain, Econometrics, Cybersecurity, Technical Writing, LaTeX
Interests Philosophy, Psychology, Meditation, Business, Entrepreneurship, Cryptocurrencies, Debating, Music Generation

EDUCATION

PhD Informatics and Communications
University of Thessaly (UTH), May 2024 – Today
Self-Funded
Developing a unified metaverse architecture for next-generation 6G systems, integrating communication networks, IoT, AI, digital twins, extended reality, and blockchain technologies. Research focuses on optimizing network performance through information-theoretic analysis and designing scalable digital twin frameworks for real-time 3D visualization applications.

PhD Electrical & Computer Engineering
University of Cyprus, Sept 2019 – Sept 2020
Paused
Research on fundamental limits of intelligent reflecting surfaces assisted wireless communications, and machine learning for wireless communications.

MSc Communications & Signal Processing
Imperial College London, EEE Department
Oct 2017 – Sept 2018
Grade: 71.8%
Signal Processing, Machine Intelligence, Computer Vision, Big Data, Pattern Recognition, Distributed Networks, Stochastic Processes.

MEng Electrical & Computer Engineering
Aristotle University of Thessaloniki (AUTH)
Oct 2012 – Jul 2017
Grade: 9.1/10 (Top 1%)
Math, Physics, Electronics, Circuits, Algorithms, Programming, Electromagnetic Fields, Communications, Antennas & Propagation, Radars, Machine Learning, Software Engineering, Signal Processing.

MOOCs (edX, Udacity & Coursera)
Mar 2013 – Jul 2020
Grade: High Distinction
Game Theory, Machine Learning, Data Science, Logic.

UNIVERSITY YEARS PROJECTS

MSc Dissertation — Imperial College London
May 2018 – Aug 2018 — London, UK
Conducted research using probability and queueing theory to study the impact of DoS attacks on the delay of computer networks.

MEng Dissertation — AUTH
Mar 2017 – Jul 2017 — Thessaloniki, Greece
Conducted research using higher order statistics to perform blind deconvolution in telecommunication systems.

Research Assistant — AUTH
Jan 2017 – Apr 2017 — Thessaloniki, Greece
Conducted research using machine learning for software quality assessment.

Microsoft Student Partner — Microsoft
Jun 2016 – Sep 2018 — London, UK & Thessaloniki, Greece
Co-organized presentations and workshops on Mixed Reality, Unity3D, Internet of Things and a hackathon.

Co-Founder — AMANDA
Sep 2015 – Sep 2017 — Thessaloniki, Greece
AMANDA was a tech solution that addressed the phenomenon of school bullying by leveraging VR/AR, ML, wearable and cloud technologies.

Electronics Team Leader — ZeroFuel
Sep 2015 – Sep 2016 — Thessaloniki, Greece
A single-seated vehicle that competed in Shell's annual Eco-Marathon.

ACHIEVEMENTS

Presented at Free Open-Source Software Conference FOSSCOMM. — Thessaloniki, 2024

Presented at AI, Data, and Modern Workplace conference organized by Microsoft MVPs. — World, 2024

Participated at Meta Presence Platform Hackathon. — London, 2023

Presented a poster at SIGGRAPH 2022. — Vancouver, 2022

Published the implementation of a Reinforcement Learning algorithm on keras.io — World 2021

1st Place, Cyprus STEAME Communication Competition — Cyprus, 2019

Marie Sklowdoska Curie Scholarship Recipient — Europe, 2019

Honorable Mention by the Chief of the Greek Army — Greece, 2019

U.S. Patent Holder — USA, 2018

3rd Place, Global Student Challenge — Hong Kong, 2017

1st Place, Microsoft Imagine Cup — Seattle, 2016

Distinction by AUTH's Rector — Greece, 2016-2018

Finalist at Greece Debating Tournament — Greece, 2016

RESEARCH WORK

Metaverse Framework for Wireless Systems Management
2025, Submitted for Publication, IEEE IoT Magazine

A Digital Twin Based Reconfigurable Intelligent Surface Phase Adaptation Using Spiking Reinforcement Learning Policy Optimization
2025, IEEE International Conference on Machine Learning for Communication and Networking (ICMLCN)

Recording and replaying psychomotor user actions in VR
2022, ACM SIGGRAPH

Less Is More: Efficient Networked VR Transformation Handling Using Geometric Algebra
2022, Springer Advances in Applied Clifford Algebras

Mages 4.0: accelerating the world's transition to medical VR training
2022, IEEE Computer Graphics and Applications

Assessing unconstrained surgical cuttings in VR using CNNs
2022, arXiv

Low-complexity random rotation-based schemes for intelligent reflecting surfaces
2020, IEEE Transactions on Wireless Communications

Random rotation-based low-complexity schemes for intelligent reflecting surfaces
2020, IEEE Personal, Indoor, and Mobile Radio Communications

Smartphone-based biofeedback games for shielding of immune system against COVID-19: the Covidshield game suite design approach
2020, ACM International Conference on Software Development and Technologies for Enhancing Accessibility and Fighting Info-exclusion

User-perceived reusability estimation based on analysis of software repositories
2018, IEEE workshop on machine learning techniques for software quality evaluation

PATENT WORK

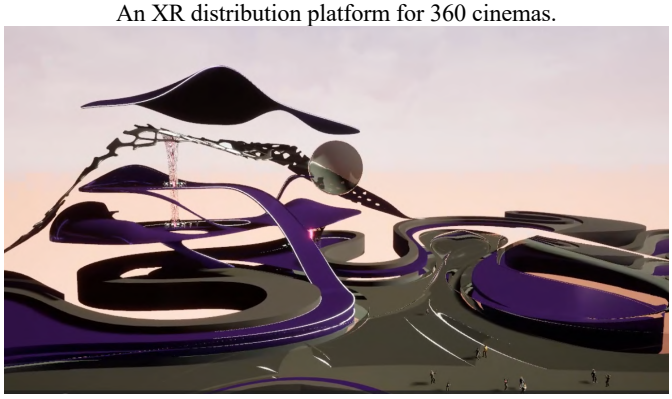
Using virtual reality for behavioral analysis
2018, USPTO, No. 9965675

PORTFOLIO

Since 2015 I have developed, managed, and owned numerous XR (VR, AR, MR), desktop, mobile, web applications using Unity, web and mobile technologies, TensorFlow, and PyTorch. I have collaborated with companies, universities, and research centers in Europe, USA, and UAE.

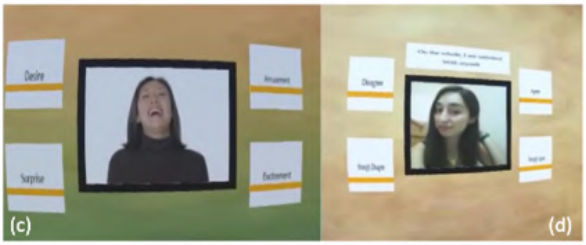
Quima

An XR distribution platform for 360 cinemas.



AMANDA

A VR/AR application addressing the phenomenon of school bullying.

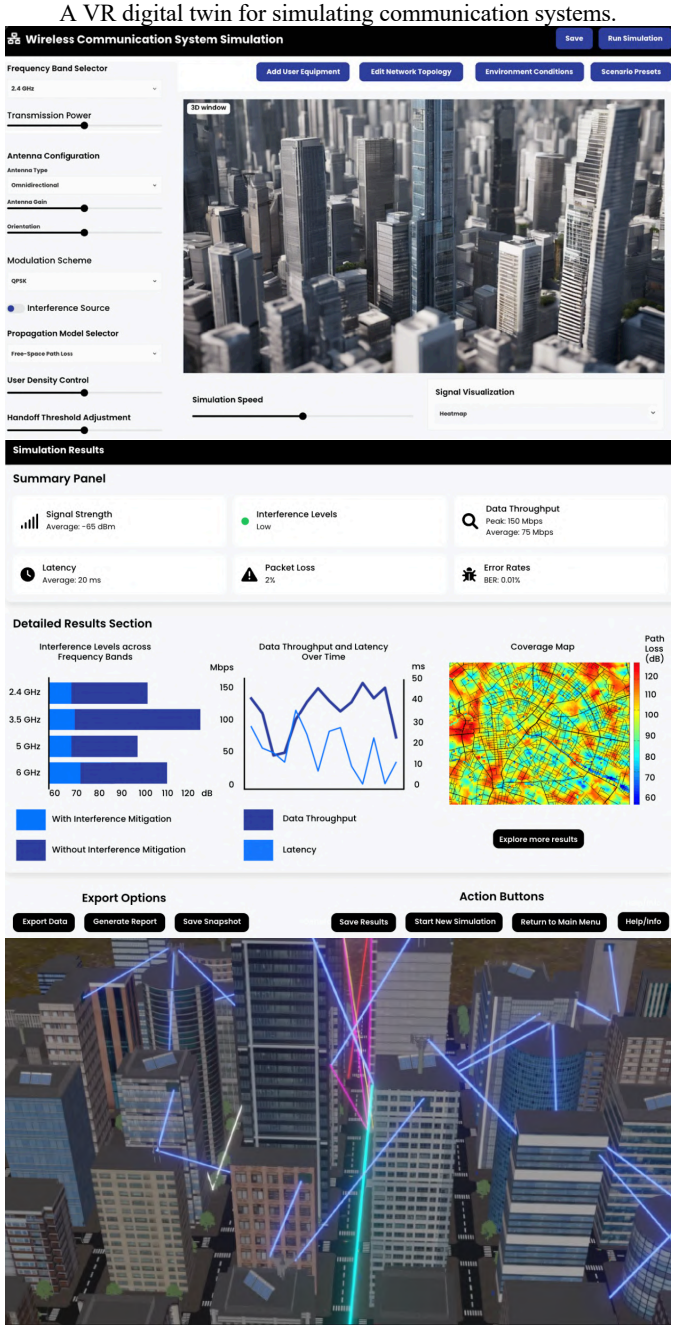


XRCade

An MR slot machine gaming platform.

VirtuNet

A VR digital twin for simulating communication systems.

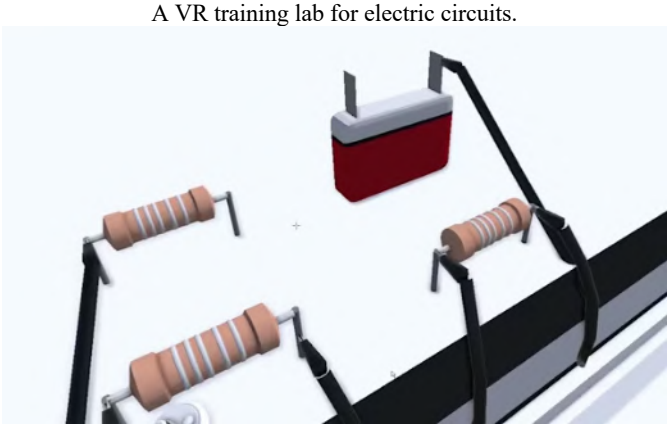


VRITS

An interactive VR training system for infantry soldier training.

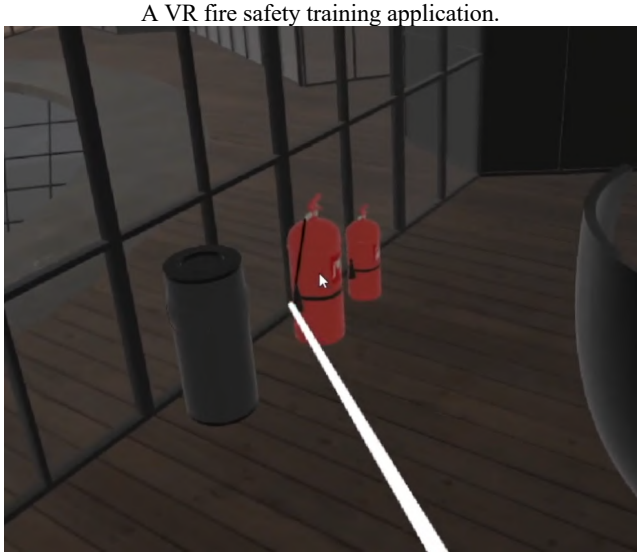
PhysiVerse

A VR training lab for electric circuits.



FireSafety

A VR fire safety training application.

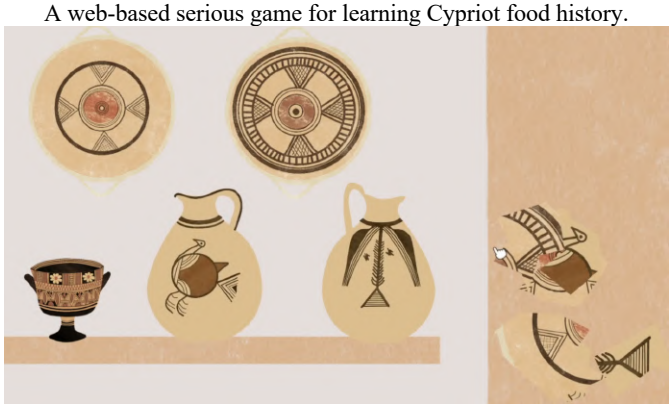


Impetus Digital Twin

A web-based digital twin platform for water management systems.

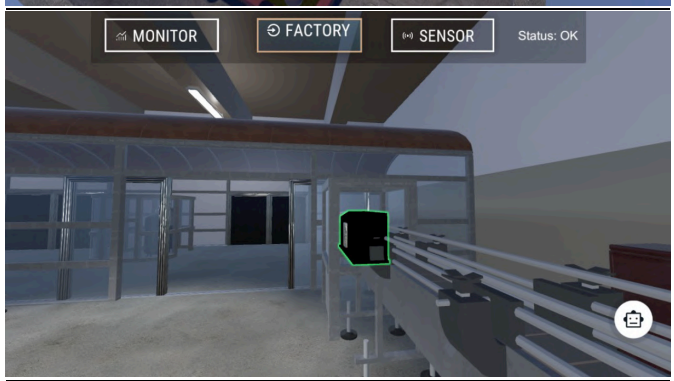
Something Ancient is Cooking

A web-based serious game for learning Cypriot food history.



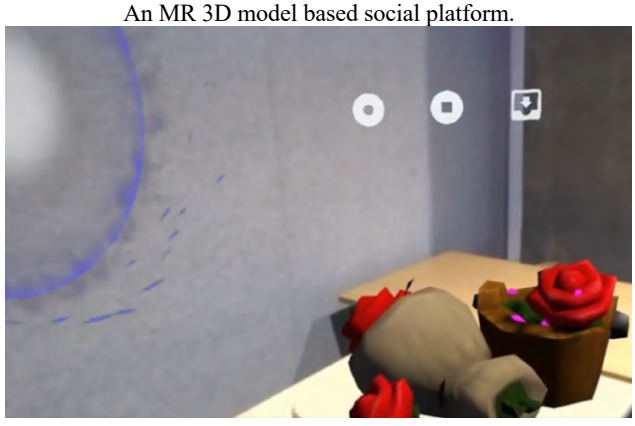
MetaPlant

A digital twin designed to meet the needs of modern factories.



Babba

An MR 3D model based social platform.



"The experience of virtual worlds helps people appreciate this physical world we have and feel tender towards it"

Jaron Lanier, Father of Virtual Reality