MICHELE PIROVANO
curriculum vitae

Personal Data
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Professional experience

2015 / Today – **Professional freelance game developer and designer**
  Clients: GhostShark, IndieGala, Troglobyte, UNAgames, DestinyBit, Videogames Without Borders, Asmodee Digital
  Specialized in Artificial Intelligence and Gameplay Programming
  Experience in VR, networking, mechanics design, balancing, procedural content generation

2016 / Today – **Game Programming Core & Specialist Trainer** at Digital Bros Game Academy
  Teaching Unity3D, Construct 2, C# and C++, gameplay programming
  Specialist trainer for Artificial Intelligence and Procedural Content Generation

2015 / 2016 – **Postdoctoral research fellow on serious Games and artificial intelligence** at Politecnico di Milano
  Design and development of health games: obesity, blood donations
  Research on Genetic Algorithms applied to games

2012 / 2015 - **Design and development of a rehabilitation exergame engine** at Università degli studi di Milano
  esearch on videogame design and its application in physical and cognitive rehabilitation for the REWIRE European project
  Design skills: Accessibility, usability, Natural User Interfaces (Kinect, WiiBB), games for health design
  Technical skills: Software architecture, multiple device integration, Bayesian adaptation, Fuzzy monitoring
  Soft skills: Leadership, teamwork, international collaborations with Zurich, Seville, Lousanne, Barcellona, Ljubljana, Oxford

2011 / 2016 - **Unity3D programming lessons** at Politecnico di Milano
  Introductory lessons, platform/action/shooter/puzzle/strategy games, mobile, performance, particle systems, physics.

Freelance work

2017 – **Design and development of A Tale of Pirates VR**
Work performed for Studio Clangore. Development in Unity of a virtual reality arcade videogame for Essen Spiel 2017.

2016 / 2017 – **Design and development of the artificial intelligence in _Empires Apart_**
Empires Apart is a real-time strategy videogame developed by DestinyBit in Unreal Engine 4 and published by Slitherine.
Development of a scripting framework to handle AI for strategic, tactical and economic control, a scripting framework for the procedural generation of maps, and a system for crowd pathfinding and formations handling.

2016 / 2017 – **Design, development and maintenance for _Antura & The Letters_**
Antura & The Letters is a free videogame for iOS and Android that teaches the Arabic language to Syrian children, published by Videogames Without Borders.
Development and maintenance of the core application, design and development of Expert System that handles teaching.

2016 / 2017 – **Programming of virtual reality experiences for Unamedia (unannounced titles)**
Development in Unreal Engine 4 of videogames and installations in virtual reality using the HTC Vive.
Development of a multiplayer videogame for E3 2016 in Los Angeles, development of an interactive installation for IFA 2017.

2017 – **Design and pre-production of a serious game for HighPulse (unannounced title)**
Game design and pre-production of an unannounced serious game.

2016 – **Programming and production of Back to Home**
Development of *Back to Home* for iOS and Android devices, part of *Acutize*, developed by XSightCO.
Design and development of a procedural generation engine for level generation.

2016 – **Design and development of Tenebrae Dungeon Generator**
Development of a procedural level generation engine for *Tenebrae*, a metroidvania videogame developed by Troglobyte Games in Unreal Engine 4.

2015 – **Design and production of the movement and interaction system of _Suicide Guy_**
Game developed by Chubby Pixel and published by Indie Gala.

2015 – **Design and programming of _Dice Master_**
Development of a tool for the procedural generation and runtime handling dice, published on the Unity Asset Store.

2015 – **Videogame programming for Krur**
Development in Unity and C# for the Audiolympics and Jamuur, not published.

2015 – **Videogame programming for Ghost Shark Games**
Development of four videogames children for the Clempad 2016 tablet using Unity, C# and Java. Work performed for Ghostshark Games.

2014 / 2015 – **Development and design of *Daedalus Dungeon Generator***
Development of a procedural dungeon for 2D and 3D videogames, published by Artskillz on the Unity Asset Store.

Education
2015 - ***Ph.D. in Computer Science*** at Politecnico di Milano
> Major Topic: Computational intelligence for rehabilitation at home
> - 18+ scientific publications on artificial intelligence, game design, and serious games
> - Curriculum focused on videogames: Reinforcement Learning, 3D Vision & Audio, Soft & Cloud Computing, Mobile Apps
> - Soft skills: talks at worldwide conferences, autonomy, research, writing, innovation, problem solving, tutoring

2011 - ***Master's Degree in Automation Engineering*** at Politecnico di Milano
> - 110/110 cum laude
> - Thesis: Accurate and real-time fluid simulation using SPH and CUDA

2009 - ***Bachelor's Degree in Information Engineering*** at Università degli Studi di Bergamo
> - Thesis: Real-time control of an inverted pendulum using open-source software

Software Knowledge
- Main Programming languages (5+ years of experience):   C++, CUDA, C#, Python
- Graphics (2D and 3D):   Major (4+): Gimp, Blender3D.   Minor: Photoshop, Flash, Illustrator
- Videogame frameworks (5+ years of experience):   Unity, Unreal Engine 4, Panda3D, Construct 2
- Sound and music: Guitar Pro, Linux Multi Media Studio, Audacity
- Operating systems: Windows, Linux – Ubuntu, Solaris, Unix

Additional Skills & Personal Interests
- Volunteer work at *Gatti di Bergamo*, webmaster of www.gattidibergamo.it
- Designing, creating, studying, and playing videogames and board games
- Listening to music (Rock, Classical, New Age), playing instruments (keyboards, ukulele)
- Movies, especially thrillers. Reading, especially fantasy and classics. Learning, about everything. Swimming & Ping-Pong
- Pixel art

Languages
> **Italian** - written: Native - speaking: Native
> **UK English** - written: Very good - speaking: Very good
> - 3 months period at Oxford, UK. Toefl: internet based test 104/120. First Certificate: grade A
>
> **French** - written: Good - speaking: Good
> - Delf A1, A2