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## EDUCATION

Video Game Design and Development (taught in English), Image Processing and Multimedia Technology Centre (CITM), Universitat Politècnica de Catalunya (UPC)
2021 – Now (4th year)

Batxillerat, Institut de Premià de Mar
2019 – 2021 (Average grade: 8.2)

## LANGUAGES

- Catalan: Native
- Spanish: Native
- English: Fluent. C1 Advanced
- French: Basic

## EXPERIENCE

- Internship as Unity Developer. DigitalTwin Technology GmbH
  Barcelona, Spain (September 2024 - Now)
  Internship as Unity Developer

- Programming Teacher. Codelearn
  Mataró, Spain (July 2024 - Now)
  Unity (2D and 3D) teacher for summer camps
  Python, HTML, Javascript, CSS, C++, Linux teacher

- Programming Teacher. Codelearn
  Mataró, Spain (June 2023 - January 2024)

Unity (2D) and Blender teacher for summer camps.
Python, HTML, Javascript, CSS, C++, Linux teacher

- Videomapping at VI Workshop Empúries. La cultura del vi.
  L'Escala, Spain (May 2023)
  Design, 2D animation and videomapping on the Empúries Ruins's model.

- Digital Edition assistant. Editorial Casals
  Barcelona, Spain (June 2022 - September 2022)
  Digitalizing activities for school books and editing video interactives

- Digital Edition assistant. Editorial Casals
  Barcelona, Spain  (July 2021 - September 2021)
  Digitalizing activities for school books

## SKILLS

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**Programming**

- **Programming languages**: C++ (3 years), C (3 years), C# (2 years), Python (1 year), Dart (<1 year), Intel x86 Assembly (<1 year), XML (<1 year), JavaScript (<1 year), HTML (<1 year)
- **Libraries**: SDL2, Box2D, Optick, OpenGL
- **Physics/Math Programming**: Collision detection and response, 3D rotation of objects, creation of a physics simulation, camera views, integrating graphical objects into a physical system
- **Graphics programming**: Bitmap manipulation, Texturing, Parallax
- **Audio Software**: Wwise
- **Development tools**: Visual Studio 2019 and Visual Studio 2022, Visual Studio Code

**Design**

- **Level Design Tools**: Tiled
- **3D Modeling tools**: AutoDesk 3ds Max, ZBrush, Maya, Blender
- **Design Tools**: Adobe Photoshop, Adobe Illustrator, Piskel, Aseprite, Adobe Substance 3D Painter

**Game Engines:** Unity

**Video and Audio editing Tools**

- **Video Editing Tools:** Adobe Premiere, iMovie
- **Audio Tools**: GarageBand, Audacity

**Organising Tools:** Trello, Scrum, HacknPlan

**Microsoft Office**: Microsoft Word, Microsoft Excel, Microsoft PowerPoint

**PROJECTS**

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**Alien: Nemesis** (**February 2024 - June 2024) (team of 23) (lead of 11)**
**Language: C++, C#, JSON**
**Role: Code Lead, Audio Engineer, Programmer, Game Tester**
Worked as Code Lead, lead of a group of 11 programmers, Audio Engineer and programmer.
Alien: Nemesis is a low-poly, fast-paced shooter with exploration, narrative, and fast-paced combat. Developed by Shadow Wizard Games Studios, a team of 23 students at CITM-UPC, developed on our own C++ game engine: TheOneEngine.
Programmed in C++ regarding everything related to the engine systems, C# for the scripts and JSON to save scenes, components and all the information related to the game itself. The game is also supported by Wwise for the audio for the game.
**Link of the team's website:**
**https://shadow-wizard-games.github.io/Alien-Nemesis-Website/**

**The Hound of Hades** (**February 2024 - June 2024) (team of 5)**
**Language: C#**
**Role: Developer, Programmer, Audio Engineer, Game Tester**
The Hound of Hades is a VR game where the player, portrayed as Persephone, has to take care of Cerberus, the hound of Hades. There are multiple actions (pet, shower, feed, play) that the player can do to interact with Cerberus, and each action has an audio, haptic and visual response, depending on the action, the object used to interact and the head out of the three heads you are interacting with.
**Link of the repository:**
**https://github.com/VicMarBall/VR-Project**

**Morpheus' Dream** (**February 2024) (team of 3)**
**Language: C#**
**Role: Developer, Programmer, Game Tester**
Submission for the 7a Gran CITM Game Jam, hosted by Delegació CITM and with the theme "Dreams and Nightmares", ranked the 10th.
Morpheus' Dream is a 3D low-poly, first-person game where the player faces how his reality and his daily routine changes and distorts in what seems to be a nightmare everyday after he goes to sleep.

**Link of the submission:**

[https://softdrawss.itch.io/morpheus-dream](https://softdrawss.itch.io/morpheus-dream)


## Fake News (November 2023) (team of 2)

**Language: C#**

**Role: Developer, Designer, Programmer, Game Tester**

Submission for the game jam Premis Ludi, hosted by 3Cat.

Fake News is a 2D mobile game where in each level, players must choose between different news titles to find which titles are fake and which are real to continue playing.

**Link of the submission:**

[https://github.com/softdrawss/Ludi/releases/tag/0.1](https://github.com/softdrawss/Ludi/releases/tag/0.1)


## Space App  (November 2023 - January 2024) (team of 4)

**Language: Dart**

**Role: Developer, Programmer**

Mobile app programmed in Dart for the subject Mobile Devices using different APIs related to its theme. The project features different information relating to all the elements we can find in the Solar System separated by body type, the astronauts that are right now in space, a daily image of the space with its information, information about the International Space Station location and daily images of the Earth.

**Link of the final release:**

[https://github.com/softdrawss/MobileProject/releases/tag/Final_Version](https://github.com/softdrawss/MobileProject/releases/tag/Final_Version)


## TheOneEngine (September 2023 - January 2024) (team of 3)

**Language: C++**

**Role: Programmer**

Game Engine programmed in C++ developed for the subject Game Engines. The engine was later used for the subject Project III as a base for the final game.

TheOneEngine is a 3D game engine developed in C++ using different libraries, such as SDL2, OpenGL, GLEW,  GML, imGui, imPlot, DeVil and rapidjson. Following the structure that Unity has, the engine features different options to move and control gameobjects, as well as serialisation of the scene, Unity-like camera-controls, model and texture import. It also features an audio system supported by Wwise with audio listener and source components.

**Link of the engine's website:**

[https://citm-upc.github.io/TheOneEngine/](https://citm-upc.github.io/TheOneEngine/)


## The Toy Box (February 2023 - June 2023) (team of 8)

**Language: C++**

**Role: Developer, Programmer, Audio Engineer, 2D Artist, Game tester**
The Toy Box is role playing game in which a group of friends go into a gigantic toy store that has recently settled in town at the request of the main character's little sister, when the group goes in they find themselves surrounded by shelves filled with toys and games for all ages and some incredible displays but there is no one inside; the group goes to explore the store separately.

Programmed in C++ and using SDL2, Optick and Box2D, developed by Fun Makers Studios for the subject Project 2.

**Link of the game's website:**

[https://fun-makers-studios.github.io/Project2_TheToyBox/](https://fun-makers-studios.github.io/Project2_TheToyBox/)

**The Pipe Maze** (**September 2022 - January 2023) (team of 2)**
**Language: C++**
**Role: Developer, Audio Engineer, Programmer, Designer, Game tester**
2D platformer video game project for the class Development of Video Games. Programmed in C++ and using SDL2, Optick and Box2D. The project features an interactive non-static UI, God Mode, loading and saving state of the player using XML, enemies that move using a pathfinding method, collectibles, health bar, timer, score, and control of frames and delta time.

**Link of the final release:**

[https://github.com/softdrawss/Game_Development_Platformer/releases/tag/Gold](https://github.com/softdrawss/Game_Development_Platformer/releases/tag/Gold)

**Worms (team of 4)**
**December 2022**
**Language: C++**
**Role: Developer, Programmer, Designer, Game tester**
2D multiplayer game inspired by the games with the same name for the class Physics II where we had to create our own physics engine.

Programmed in C++ using the libraries SDL2, the game displays the information of an environment with water and solid elements showing the values of the player position, buoyancy, wind, drag coefficients, gravity and velocity and acceleration of the weapon thrown by the user. The game also lets the player change the value of any of the variables mentioned. The game also displays one of the players in God Mode and the other not, to display how many health points can be extracted with the weapons, and features a game loop when one of the players dies or drowns.

**Link of the release: [https://github.com/There-can-only-be-two/Worms/releases/tag/Worms](https://github.com/There-can-only-be-two/Worms/releases/tag/Worms)**

**Awesome Pinball (team of 4)**
**September 2022 - November 2022**
**Language: C++**
**Role: Developer, Programmer, Designer, Game tester**
2D Pinball video game developed for the class Physics II inspired by the 3D Pinball Windows.

Programmed in C++ using the libraries SDL2 and Box2D, the games features changing UI, Ranking, editable Physics (gravity, coefficients, etc) and number of frames, as well as an interactive display of the pinball that send feedback to the player with changing lights and audio. It also features Highscore, Current Score, Previous Score, multipliers and a timer.
**Link of the release: https://github.com/There-can-only-be-two/Pinball/releases/tag/v1.0**


**No time to Di(c)e (team of 12)**
**July 2022**
**Language: C++**
**Role: Developer, Programmer, Designer, Game tester**
Submission for the GMTK Game Jam 2022 hosted by Game Maker's Toolkit, result in the #1287 (Enjoyment: #1169, Creativity: #1453, Presentation: #1489, Overall: #1287).
Top-down shooter where you seek revenge to save your dice friend programmed in C++ and with the library SDL2. The game displays a health bar where the amount of health points are represented with dice, power-ups, different types of enemies, a final boss and a game loop.
**Link of the submission: https://xgauss05.itch.io/no-time-to-dice**


**Guerrilla War (team of 4)**
**February 2022 - June 2022**
**Language: C++**
**Role: Developer, Audio Engineer, Programmer, Designer, Game tester**
Project for the class Project I where we had to recreate an Arcade game entirely and program it.
Guerrilla War is the recreation of the arcade game Guerrilla War (1987) programmed in C++ and C and with the libraries SDL and can be played on keyboard and gamepad.
The game features God Mode, UI, health bar, HighScore, Current Score, a game loop.
**Link of the release: https://github.com/softdrawss/Halal_Guerrilla_War/releases**


**WEB PAGES**

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**Portfolio: https://softdrawss.github.io/**

**LinkedIn: https://www.linkedin.com/in/j%C3%BAlia-serra-trujillo-12514b264/**

**Github: https://github.com/softdrawss**

**Itch.io: https://softdrawss.itch.io/**