Thanos Restas

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WORK EXPERIENCE

CERTH   **July 2020 – Present**
Software Developer - Full-Time   *Thessaloniki, Greece*

- **ARIBFA**

Augmented Reality enabled In-situ Building Feature Annotation application   **Unity3D, C#, Microsoft Hololens**
  - o   Designed and developed a 3D AR Menu System for IFC data visualization and editing.
  - o   Implemented AR text annotation capabilities of 3D MEP components in loaded BIM files.
  - o   Added methods for creating, editing and saving annotation data through the serialization of JSON files.
  - o   Integrated RESTful services for sharing in-building user location and text annotation data.

- **ActiVatoR**

Virtual Reality educational game   **Unity3D, C#, HTC Vive**
  - o   Developed NPC behaviour logic using Unity3D coroutines.
  - o   Used Unity Timeline events and triggers to simulate a Volcano's eruption.
  - o   Implemented functions for handling the ballistic movement of projectiles.

- **iProduce**

AR-VR Product Configurator and Collaboration Tool   **Unity3D, C#, Mirror**
  - o   Mirror Networking framework integration achieving real time multiplayer collaboration.
  - o   Porting the application on Android using AR Foundation.
  - o   Porting the application on Hololens using the MRTK.

- **AR Volumetric Video Player**

Mobile Application   **Unity3D, C#, Python, Meshlab**
  - o   Achieved Point Cloud to textured mesh sequence conversion using Python scripting on Meshlab's API
  - o   Preprocessing of data from PLY to OBJ + PNG to Draco GLTF + ktx2 and MP4 texture sequence
  - o   Draco GLTF sequence to Unity Mesh importing and instancing
  - o   Combined GLTF and ktx2 compression to achieve smaller asset sizes and memory footprint
  - o   Real-Time MP4 frame to Texture extraction for texturing meshes

EDUCATION

Ionian University
BS, Informatics – Humanistic Informatics   *Corfu, Greece*

- **Thesis: Design and Development of a Complete Three-Dimensional World in WebGL**

First Person Shooter game for the web created using Microsoft's BabylonJS framework
  - o   Used modern ES6 JavaScript standard features to create all game system abstractions on top of the provided BabylonJS methods.
  - o   Designed classes encapsulating the functions of four different enemy types, supporting Moving, Attacking and Idle animated states.
  - o   Developed a Mesh Picking system via Ray Casting for enemy hit detection.
  - o   Created a basic game loop featuring a main quest and game over/winning conditions.

SKILLS

- **Programming Languages: Experienced:** C# **- Hobbyist:** C++, JavaScript, Python
- **Tools & Frameworks:** Unity3D, Git, Visual Studio, MRTK, BabylonJS, SDL, AR Foundation