Wei-Che Hsu

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EDUCATION

Carnegie Mellon University, Entertainment Technology Center (ETC) | Pittsburgh, PA   Aug 2020 - Present
Master of Entertainment Technology

National Taiwan University | Taiwan, Taipei   Sep 2015 - July 2017
Master of Civil Engineering, Computer-Aided Engineering (GPA 4.05/4.30)
Relevant courses: Object-Oriented Programming (C++), Data Structures & Algorithms (C++), Rapid Prototype

SKILLS

Programming Languages: C++, C#, JavaScript, Python.   Game Engines: Unity 3D, Unreal
Game Development: VR/AR, ML-Agents, Engine Development, Rapid Prototyping
Data Analytics: Tableau, Keras, TensorFlow, Scikit-learn
Web Development: HTML, CSS, React, Reduct, MongoDB, Node.js
3D Graphics: **SketchUp, Adobe Revit, Rhino 3D**   Management Tools: **Jira, Git**

EXPERIENCE

Jubo.health | **Software & Data Engineer**   Dec 2018 - June 2020
- Developed websites (JS, React, MongoDB) for 1,000 caregivers in 32 elder-care centers to help them organize medical notes and communicate with patients' family members, eventually enhancing the quality of caring.
- Visualized 2,000,000 items of data with Tableau to find valuable information for managers and caregivers.
- Designed the algorithm and data structure to develop the drug interaction detection system of 6,000 drugs.
- Developed artificial intelligence products with Python (Scikit-learn) for personalized abnormal vital sign detection which can reach an accuracy of 89.91%. and was released as the selling point of the products.
- Prototyped CNN models with 3,000 sores photos to filter bedsores which can reach an accuracy of 90.01%.

Water Environment O2O | **Virtual Reality Developer**   Aug 2016 - July 2017
- Created a VR Game using a novel experiential intervention in pro-environmental education to promote human intention to actively engage in water conservation issues.
- Collaborated with an art designer to develop the game with Unity (C#), HTC Vive, and Kinect which was exhibited at the National Taiwan Science Center to inspire 1,000 students' understanding of water conservation.
- Designed gameplay, built 80% 3D model, programmed the game, and conducted user tests.

ACADEMIC PROJECTS

Building Virtual Worlds | **Game Programmer**   Sep 2020 - Present
- Rapid prototyping games class with 5 rounds each lasts for 1-2 weeks with interdisciplinary teams of 5.
- Developed interactive experiences and games with Unity, Webcam and voice recognition software.
- Created visual effect (smoke, fire, water), light, and animation (game story) for interactive content with Unity.
- Designed and Implemented gameplay, transition between the game's scenes, sound effect with artists and sound designers.

PERSONAL PROJECTS

2D/3D/VR Games Prototype and ML-Agents Development | **Programmer**   June 2020 - Aug 2020
- Rapid prototyped a 2D musical game, a 3D survival shooting game, a 3D run games, a 3D Physics Playground Game, and a VR (Oculus) Escaping Room Game with online assets by Unity (C#) and Unreal (C++, BluePrint).
- Created intelligent flying hummingbirds that can navigate to flowers and drink nectar with Unity ML-Agent. Crafted a training environment and trained neural networks to perform reinforcement learning.