Jirawat Hirunkam

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EDUCATION

Florida Gulf Coast University, **Ft. Myers, FL** **August 2015 - May 2019**

Major: Software Engineering, B.S (GPA: 3.51)

SE Coursework: Object-Oriented Programming, Data Structures & Algorithms, Operating Systems, Software Specifications, Software Security, Data Engineering, VR Game Development, Software Architecture & Design, Cyberphysical Systems, Software Project Networks, Software Testing, Cyber Security

EMPLOYMENT

VIPER Lab Research Assistant, U.A Whitaker College of Engineering, Florida Gulf Coast University
January 2018 – Present , https://www.fgcu.edu/eng/softwareengineering/viperlab/index.aspx

Eagle Expo VR Demo

- Implemented an interactive architecture visualization game to allow students and faculties to study a construction project in virtual reality.
- Integrated the Precision Positional Tracking (PPT) infrared camera sensors to a Corner Cave VR System to provide the millimetric precision tracking of a user which would allow them to immerse more into the VR environment.
- Leveraged knowledge in Vizard development using Python, PPT System, Corner Cave VR projection, and 3ds Max.

Real Time FGCU Fluid Dynamic Flood Simulation

- Implemented a real time 3D flood simulation of Florida Gulf Coast University campus to allow researchers to visualize the hydrodynamic effects of flood on the campus by utilizing Nvidia Fluid Dynamic Engine and Unreal Engine 4.
- Optimized and increased the performance of the fluid dynamic engine by 40% to allow smoother rendering of the simulation by manipulating Unreal Engine 4 particle system to use GPU processors more efficiently.
- Leveraged knowledge in Unreal Engine 4 development with C++ using Visual Studio and Blueprint Visual Scripting, Photogrammetry, Nvidia Cataclysm, and Autodesk Recap.

PROJECTS

Personal Website: https://jirawathirunkam.github.io/website/ (for additional information and projects)

FGCU VR Flood Simulation

- Lead a team of 7 software engineering students to develop a scientific virtual reality simulation software that provides an immersive flood visualization caused by hurricanes on Florida Gulf Coast University campus based on real hydrology data.
- Implemented a pseudo dynamic water effect based on hydrology point cloud data to provide realistic visuals.
- Incorporated unit, functional, and integration testing to test if the software meets the requirements and specifications.
- Utilized: C++ and Blueprint visual script programming, UE4 Procedural Mesh Generation, Git, Hybrid of Waterfall and Agile SDLC, Automation Unit Testing Tool from UE4, Goolgletest for C++, GNU LCOV tool for branch and statement coverage, Blender, Drone Deploy, Photogrammetry, Oculus Rift, and Corner Cave VR projection

ADAM

- Built an Automatic Directional Antenna Mechanism (ADAM) device to search nearby cellular signals to amplify the best found signal so that people can rely on their mobile device for better internet service through LTE.
- Utilized: Python, C, Java, Raspberry Pi, Servos, Arduino, and Android device.

SKILLS

Proficient: Java, Python, C++, Waterfall and Agile Software Development Life Cycle, Git, Visual Studio, Vizard and Unreal Engine 4 Development

Familiar: JavaScript, HTML5, React, CSS, SCSS, H2 SQL, Jira, Blender, 3ds Max, and, Photoshop