Tushar Purang

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EDUCATION

U. OF PENNSYLVANIA
MS in Computer Science
Major in Computer Graphics and Game Technology (CGGT)

LINKS

Github:// tusadi
LinkedIn:// tpurang
YouTube:// Tushar
Devpost:// Tushar Purang

SKILLS

PROGRAMMING

•C++ •C-sharp • Java • Python
• Unity• Unreal Engine• AR/VR
• OpenGL•WebGL
•CUDA

Also familiar with:
•Maya • Houdini • Motion Capture
• GIMP • Git • JavaScript

HARDWARE

• Microsoft Hololens 2 • HTC Vice
• Magic leap one

COURSEWORK

• Interactive Computer Graphics
• Computer Animation
• 3D Computer Modeling and Structure
• Product Design
• Physics-based Rendering (PBR)
• Physics-based Animations (PBA)
• GPU Programming
• Game Design
• Machine Perception (CV)

ACCOMPLISHMENTS

•Unity Student Ambassador since 2017
•Winner-Mobile VR category at SwedenVR
•Winner-Medical Healthcare category at USC
•Runner-up - Best Innovation at Masterpiece 1.0 Dubai
•Among top 5 teams in India at eYRC Robotics competition
•Winner-uHack 2017 to 2019

EXPERIENCE

UNIVERSITY OF PENNSYLVANIA | Research Assistant
February 2020 – Ongoing | Philadelphia, PA

- Working as an augmented reality developer.
- Built an augmented reality platform for surgeons to perform orthopedic surgeries using Microsoft HoloLens and Hololens 2.
- Designed sensor mounts to create smart-surgical instruments.

MANOMOTION | Software Engineer Intern + Interactions Designer
Aug 2018 – Oct 2018 | Stockholm, Sweden

- Developed multiple mobile applications using Unity3D game engine and Manomotion's hand-tracking SDK for android and iOS.

AWARDS

Outstanding Research Award - University of Pennsylvania

PROJECTS

REMOTE GPU RENDERER

- A remote rendering service similar to Azure's Cloud based Remote Rendering. Created using OpenGL, CUDA and c++.
- Uses the power of GPU rendering to get real-time path tracing results and render them as spatial scene in Hololens 2

MINI MINECRAFT

- Interactive 3D game in the style of Minecraft. Created using OpenGL and C++.
- Implemented the game engine, camera, player physics, texture mapping and animation, shadow mapping with day/night cycle and post-process camera overlay inside liquid blocks, sound effects, FPS+Tower defense game mini game.

HAPTIC GLOVE | Undergraduate final project

- Developed a haptic glove with touch and vibro-tactile feedback. The glove was developed further to be used in a navigation system for visually-impaired.
- Technologies used: Unity3D, ARCore, Raspberry Pi, Arduino, Flex sensors.

STROKEREHAB VR | Winner - Best healthcare project

- Developed a VR application to help stroke patients regain muscle strength.
- Developed using Unity3D and c-sharp.
- Used HTC Vive and Leap motion hand tracking device to capture patient's hand movement and generate a report for the physicians.