RUSHIL KEKRE

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EDUCATION

MS – Visualization (Computer Graphics) *December 2017 (expected)*
Texas A&M University College Station, TX

BE – Computer Science *2009 – 2013*
PES Institute of Technology Bangalore South, India

SKILLS

Languages/API: C++, OpenGL, GLSL, Python, HTML, CSS, JavaScript, Bootstrap
Software/IDE: Visual Studio, Git, Houdini, Unreal Engine, Unity, Maya, Photoshop
OS: Windows, Ubuntu, Mac

EXPERIENCE

FX Intern *January 2017 – May 2017*
SideFX Software Santa Monica, CA

- Assisted senior production specialists with Houdini 16 workflows
- Testing new Houdini 16 toolsets

FX Intern *June 2016 – August 2016*
Framestore New York City, NY

- Built tools for procedural modeling and FX elements used in production of commercials
- Modified functionality of existing tools based on artist requirements

Graphics Programming Intern *February 2013 – April 2013*
Virtual Logic Systems Bangalore, India

- Developed a spark generation tool in C# for a welding simulator running on Unity game engine

SELECT PROJECTS

OpenGL Render Engine – A real time rendering engine using C++, OpenGL, GLSL and ImGUI.

- Features include PBR texturing using albedo, normal, roughness, metallic and AO maps
- Image based lighting using HDR maps
- Deferred rendering using G-Buffer, SSAO
- Model loading, model transformation, point and directional lighting, skybox integration

Path Tracer – Developed using C++

- Includes glossy reflections, refractions, materials
- Light sources, soft shadows, etc.

Flocking Simulation – Developed using Processing

- Based on Craig Reynold's '87 SIGGRAPH paper: Flocks, Herds, and Schools: A Distributed Behavioral Model
- Includes collision detection, flock centering, velocity matching, multiple independent flocks

Digital Image Processing – Developed using C++

- Implemented smart blur, dilation, erosion, emboss filters
- Translation, rotation, scaling, shear, perspective and mirror features

Battleships – A 2D game developed using C++ and OpenGL (Team project: 2 members)

- Created 2D animation for cut scenes
- Developed hit recording and score keeping algorithm

ADDITIONAL EXPERIENCE

- Taught C++ and OpenGL as a **Graduate Teaching Assistant** for VIST 270 - Computing for Visualization 1
- Wrote scripts in Matlab as a **Graduate Research Assistant** from Jan '16 to May '16 on a NSF funded Augmented Reality project based on eye tracking, running on Unity
- **FX Technical Director** on "The Novice" and "Knot Today"