AKHILESH VIJAYKUMAR
Technical Artist
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EXPERIENCE

Department Technical Director   January 2022 - Present
DreamWorks Animation L.L.C   *Glendale, CA*
- Developing and maintaining tools for Character Effects workflows

Technical Artist Intern   May 2021 - November 2021
Electronic Arts Inc.   *Orlando, FL*
- Developing procedural tools to simplify and speed-up Body workflows for Character artists
- Scripting in the Frostbite engine using Python

Graduate Teaching Assistant   August 2019 - May 2021
Texas A&M University   *College Station, TX*
- Teaching and grading assignments on **Object-Oriented Programming Concepts in C++ and OpenGL**
- Developed the **TxGRAPH'2021 Conference** website using **HTML5,CSS3 and jQuery**
- Grading assignments for **The Digital Image** and **Image Synthesis**

Trainee Software Engineer   January 2019 – June 2019
Refinitiv (formerly Thomson Reuters Financial and Risk)   *Bangalore, India*
- Worked on the **Investment View+ tools** to:
  * Design and implement new functionality using **Angular 5, C# and SQL**
  * Identify and resolve software bugs **(30 Minor, 3 Major and 2 Critical)** reported

TECHNICAL SKILLS

Languages: Python, MEL, C++, C#, C, Java, SQL, GLSL/HLSL
Web Technologies: HTML5, CSS3, PHP, JavaScript, AJAX, jQuery, TypeScript
Softwares/Libraries: OpenGL, Tensorflow, PyTorch, Maya, Houdini, UE4, Photoshop, AfterEffects, Unity, Substance Painter
Certification: **NPTEL Online ELITE Certification** in **Introduction to Machine Learning** from **IIT Kharagpur**

PROJECTS

Deep Learning for Houdini   Spring '21
- Trained AI models to predict real-valued parameters from images and use them to build procedural 3D models of floorplans.

Houdini Game Jam   Fall '20
Theme: Don't Panic
- Worked in a team of 2 to make a game in Unity.

Mesh Grouping Tool in Houdini   Fall '20
- A simple interface to form the closest possible, non-intersecting group of meshes, with randomized orientations.

Computer Graphics   Fall '20
Implemented Rendering concepts like:
- Anisotropic Filtering, Physically-Based BRDF, Path Tracing and Non-Photorealistic (Painterly) Rendering

Machine Learning and Deep Learning   Spring '20 / Fall '20
Explored models like:
- Decision Trees, Perceptrons, Neural Networks and Ensmeble Networks
- Linear and Logistic Regression, PCA and Autoencoders, Recurrent Neural Networks and Residual Neural Networks (with Mixup training, Dropout and Cosine Learning Rate decay)

The Digital Image and Image Synthesis   Fall '19 / Spring '20
Implemented 2D and 3D Computer Graphics concepts like:
- Anti-aliasing, Ray Casting, Texture mapping and Distributed Ray Tracing
- Convolution Filtering, Compositing, Dithering, Stitching, Carving and Local Illumination Shader

Animation Industry Course   Summer '20
Theme: Photorealism
- Worked in a team of 5 to create a 30 second Animated short film in Maya.
- *Roles:* Project Management, Modeling, Texturing, FX and Lighting

3D Modeling and Animation   Fall '19
Secret of the Quokka
- Worked in a team of 5 to create a 30 second Animated short film in Maya.
- *Roles:* Modeling , Blend Shapes , Animation and Lighting

Visual Storytelling   Spring '21
- Developed a Web-based interface for creating single-panel Cartoon Comics from a variety of Caricatures.

EDUCATION

Texas A&M University   College Station, TX
*Master of Science in Visualization (**GPA : 4.0**)*   *August 2019 - Present*
R N Shetty Institute of Technology   Bangalore, India
Bachelor of Engineering in Information Science   *August 2015 - July 2019*