

MIGUEL A SANTIAGO JR.

OBJECTIVE

Pursue my career in Character Modeling, look development and shader development, while working on challenging and innovative projects within a collaborative team-oriented environment.

QUALIFICATIONS

Skills

- Look Development - Build shader networks using GUI environments, develop and program shaders, assemble scene renders, and optimize/troubleshoot renders.
- Texturing - Projective, procedural and hand painting texturing techniques.
- Modeling - Organic modeling in digital character/creature sculpting. Polygon modeling, hi-res digital sculpting, and resurfacing techniques.

Technical Coding Skills

- C++ (Intermediate)
- Maya API (Shader Programming)
- Mental Ray API (Shader Programming)
- Maya Embedded Language (MEL)
- Renderman Shading Language (RSL)
- High Level Shading Language (HLSL)

Software

- Autodesk Maya, Mental Ray, Pixar Renderman, Vray, Zbrush, Mari, Digital Raster NEX, xNormal
- Crazy Bump, Adobe Photoshop, Adobe After Effects, Unreal Engine 3.x, Render Monkey
- Microsoft Publisher, Microsoft Word, Microsoft Visual Studio, Perforce

WORK EXPERIENCE

3D Character | Shader Artist
America's Army, Huntsville, AL 35898

June 2007 - Present

- Digital sculpting of character and environment props using zbrush along with retopologizing assets.
- Lay out UVs for created models using a range of LSCM and Pelt mapping tools and ensure UV pixel ratio.
- Bake an assortment of transfer maps from Diffuse, Specular, and Normal off the high resolution mesh.
- Create shader networks in the Unreal Engine material editor to build and maintain a shader library of shading models for use with both environment and character props.
- Use the existing shader library to develop new shader networks based on per project needs; modify existing shader parameters to achieve the desired look.
- Optimize shader networks for performance while not sacrificing appearance.
- Develop a Tile-able based texturing workflow to meet the needs of the environment department.
- Provide quick tile based solutions for applying texture maps into existing shader networks to achieve consistent look development results across the project.
- Implement a skin shading system and workflow in the Unreal Engine based on "GPU Gems 3 - Realistic Real-Time Skin Rendering." The Skin shader includes the multilayered BSSRDF diffusion rendering method to capture realistic color-bleeding and surface blurring in real-time.
- Collaborate with the environment and character team to develop technical shader solutions to solve various look development issues that may arise during production.
- Assist in training artists and troubleshooting usage and development of shader networks.
- Utilize tools such as Perforce, Jira, and Confluence to maintain and track procedures in asset creation.

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WORK EXPERIENCE

Shader Writer

Sept 2003 – Present

Personal Project / Shader Collection

- Research and develop various shading models with a strong emphasis on skin shading techniques using the Autodesk Maya API and Mental Ray API C++ programming.
- Develop an improved skin shading system with the DT3D skin shader. Develop custom subsurface scattering terms based on physiological effects found in skin. Integration and further development of the BSSRDF - Diffusion Dipole based on "A Rapid Hierarchical Rendering Technique for Translucent Materials" from contributor Wang Wei.
- Implement shading models currently not available in Autodesk Maya software and Mental Ray renderer which were made publicly available for download to the CG community through various sites including The Area, Creative Crash, ShareCG, and Digiteck3D.

Look Development Artist

July 2008 – August 2010

Ballistic Publishing

- Work with the lead texture artist and modelers to determine the necessary design and technical solutions needed to accomplish the specific look development style per creature.
- Develop a skin rendering shader workflow centered around my custom built skin shader DT3D skin shader in Mental Ray to achieve the desired look development renders.
- Setup and determine a standard to define the necessary render passes outputted in the frame buffer layers for each creature's shading network for compositing.
- Handle all aspects of render setup and execution along with meticulously troubleshooting rendering artifacts and optimization in the renders.
- Develop and setup HDRI lighting rigs to confirm the look development quality under various lighting conditions.

3D Artist

Nov 2003 - Dec 2003

Shepherds-Pie Productions, Dacula, GA 30019

- Interior and exterior prop modeling for CG sets on animated feature called Summer Camp.
- Perform character rig weight setup on the characters for deformation.

Internship

Mar 2003 - May 2003

Full Sail University, Winter Park, FL 32792

- Continued study of 3D techniques and workflow techniques in character modeling.
- Continued study in character creation development and human anatomy form.

EDUCATION

- A.S., Computer Animation, Full Sail University, 2003
- Certificate of Extended Studies in the Media Art, Full Sail University, 2003

CREDITS

- America's Army 3 (PC)