

# MIGUEL A SANTIAGO JR.

## PROFESSIONAL SUMMARY

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Experienced artist focusing on 3d character development. Knowledgeable of the entire character development pipeline specializing in modeling, texturing, and shader development.

## WORK EXPERIENCE

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### June 2007 - Present

America's Army  
Huntsville, AL 35898

#### *3D Artist*

- Utilizing Epic Unreal Engine 3.x and Autodesk Maya to build assets on America's Army training applications.
- Modeling and texturing low to high poly characters and props for various applications.
- Laying out UVs for all models created using a range of LSCM and Pelt mapping tools.
- Baking an assortment of transfer maps from Diffuse, Specular, and Normal off the high resolution mesh.
- Bringing the models into the Unreal Engine to examine for modeling errors and to develop shading materials using the Material Editor.
- Implement a skin shading system and workflow in the Unreal Engine based on "GPU Gems 3 - Realistic Real-Time Skin Rendering". Skin shader includes the multilayered BSSRDF diffusion profile to capture color-bleeding and surface blurring.
- Responsible for various environment art tasks including creation of materials, sky domes, light setups, and final polish on roughed out levels.
- Recruiting and interviewing potential applicants.

### July 2008 – Present

Ballistic Publishing

#### *Shading Artist/Contributing Author (Freelance)*

- Working as a creature shading artist on soon-to-be announced book.

### Sept 2003 – Present

Personal Project / Shader Collection

#### *Shader Writer*

- Researching and developing various material shading techniques including skin shading using the Autodesk Maya Api and mental ray Api C++ programming.
- Implementing material shaders not currently available in Autodesk Maya software renderer and mental ray renderer.
- Primary focus on DT3D skin shader to develop an improved skin shading system. Developing custom subsurface scattering terms based on physiological effects found in skin. Integrating and further developing BSSRDF - Diffusion Dipole based on "A Rapid Hierarchical Rendering Technique for Translucent Materials" from contributor Wang Wei.
- Created 11 publicly available shaders for download at various sites including Highend3d, ShareCG, and Digiteck3D.

### June 2004

Thinking Man Studios  
Greenwood, IN 46142

#### *Shading Artist (Freelance)*

- Shading and texturing for character in proposed animated series.
- Creating and developing procedural skin texture/skin shader and leather shader using Autodesk Maya Hypershade to build shading networks.
- Experimenting with cartoon shading techniques to build cartoon shading network.

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## WORK EXPERIENCE

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**Nov 2003 - Dec 2003**

Shepherds-Pie Productions  
Dacula, GA 30019

*3D Artist (Freelance)*

- Modeling interior and exterior props for CG sets.
- Performing character weight setup on the characters for deformation in animation.

**July 2003**

Tribe Studios  
Huntsville, AL 35805

*3D Artist (Freelance)*

- Creating a 15-second promotional video. Duties including: modeling, UV mapping, texturing, animating, blend shapes and facial animation.

**Mar 2003 - May 2003**

Full Sail University  
Winter Park, FL 32792

*Internship*

- Continuation of 3D learning and improvement in character modeling.
- Developing new workflow techniques and studying character creation techniques.

## QUALIFICATIONS

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### **3D:**

*Modeling* - Organic modeling with main interests in character/creature modeling. Polygon modeling, hi-res digital sculpting, and resurfacing techniques.

*Texturing* - Projective, procedural and hand painting texturing techniques.

*Shading* - Extensive building of shading networks using visual editor environments.

Programming illumination shaders for use in several different rendering environments based on look development needs.

### **Technical Coding Skills**

- C++ (intermediate)
- Maya API (shader programming)
- Mental Ray (shader programming)
- Mel (working knowledge)
- HLSL

### **Software**

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

## EDUCATION

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**Nov 2001 - May 2003**

Full Sail University  
Winter Park, FL 32792

- Associate of Science Degree in Computer Animation
- Certificate of Extended Studies in the Media Arts