MATT MCCRORY

165 N Desplaines St
Apt 501
Chicago, IL 60661

T 1-847-809-7987
matt@mattmccrory.com

OBJECTIVE

To engineer creative solutions to challenging problems in science and the arts.

EXPERIENCE

WALT DISNEY IMAGINEERING — SEPTEMBER 2018 - PRESENT

Sr. Software Engineer - Built Python/C++ pipeline tools in support of the R&D of new park attractions & animatronics. Utilized Deep Learning (TensorFlow) to accelerate animatronic face rig design and animation (patent-pending). Built tool to calculate volumetric extent of a ride's vehicle + guests (C++, OpenVDB, CGAL, OpenGL/GLSL).

EVERCOAST — JUNE 2017 - SEPTEMBER 2018

Principal Volumetric Codec Engineer - Developed C++11/Python-based tools to process volumetric video capture from a multi-camera rig (both locally and on AWS). Implemented research papers in the design of a procedural mesh texturing system. Developed Qt5/OpenGL4.1 GUI apps to review final assets in motion. Developed Python/ PySide2 apps to edit & submit pipeline jobs. Built Maya & Unity scripts to ingest and playback final assets.

FREE RANGE ANIMATION — OCTOBER 2016 - JUNE 2017

Sr. Pipeline TD - Worked with a small team to build a cloud-based studio pipeline in Python/C++ for Jon Stewart's startup with the goal of fast-turnaround topical animation (storyboard to final render in a day). Utilized PySide and Python APIs for Shotgun, Slack, Box, and Dropbox to create workflow tools primarily for Maya 2016/17.

RAINMAKER ENTERTAINMENT — MARCH 2016 - OCTOBER 2016

Sr. Lighting Pipeline TD - Developed C++/Python tools for Maya and PRMan. Provided support for lighting/surfacing departments. Developed RIS plugins and helped transition studio from REYES to RIS/RenderMan 21. Contributed to hair, fur, and particle systems as well as Alembic mesh processing for interactive and final rendering.

NORTHWESTERN UNIVERSITY — JULY 2008 - FEBRUARY 2016

Lead Visualization Engineer - Provide data visualization services for research faculty at Northwestern.
Astrophysics - Automated the production of single and binary stellar evolution animations in Maya and Shake.
Chemistry - Built a 25 screen passive stereo 3D display wall and visualization tools to provide researchers a 52 megapixel 3D canvas on which to teach and conduct research. [http://nyti.ms/23TU7CH] (C++, OpenGL)

DREAMWORKS ANIMATION — JULY 2005 - APRIL 2008

Kung Fu Panda, Lighting Artist/TD - Used proprietary lighting and compositing tools (Light and Comp) to achieve the look set forth by the art directors. Mixed use of direct and global illumination. Lit with Light, comp'd with Comp.

Flushed Away, Lighting Technical Director - Developed C++, Perl, and Python lighting pipeline tools. Provided technical direction and support for a team of 7 to 10 lighting artists. Lit and composited shots with Light and Comp.

UNIVERSITY OF CHICAGO BIO SCIENCES DIVISION, DEPT OF SURGERY — SEPT 2004 - JULY 2005

Software Engineer - Developed real-time CAT scan, MRI volume renderer (C++, OpenGL Shading Language).

DREAMWORKS ANIMATION — OCT 2003 - SEPT 2004

Shark Tale, Assistant Lighting TD - Developed C++, Perl, & MEL lighting pipeline tools. Supported team of 7 to 12 lighting artists. Lit/composited shots using in-house & commercial tools (Maya, mental ray, RenderMan, Shake).

ARGONNE NATIONAL LABORATORY — JUNE 2000 - OCT 2003

Software Engineer - Developed C++ apps for researchers: OpenGL volume renderer for the TeraGrid supercomputer, real-time color & geometry correction for tile displays, CAVE VR apps, PRMan shadeop volume renderer.

EDUCATION

North Central College, Naperville, IL — B.S. Computer Science, 2001

SKILLS

Computer Languages & API's: C++, Python, TensorFlow, Qt, Mel, OpenGL/GLSL, Shotgun, Slack, PRMan/RIS.
Production Software - Maya, RenderMan, Nuke, Unity, mental ray, Shotgun, RV, Houdini, Linux/Mac/Windows.
General - 3D graphics, deep learning, production pipeline development, real-time rendering, stereo 3D, UI design.