

Robert Armstrong

Technical Artist

Robert Armstrong
97 March Court,
Warwick Drive
Barnes.
Surrey.
SW15 6LD

07380 843388
rwsarmstrong@yahoo.co.uk

Skills

- Event photography and video editing.
- 3d rendering fundamentals (PBR, lighting, modelling pipeline)
- Character motion capture workflow (body/face)
- Virtual reality input/rendering.
- Camera rectification/reprojection.
- Lighting (rendering/real world/mixed).
- Unreal Engine Sequencer workflow.
- iOS deployment (Unreal Engine).
- Graphical design (photoshop/illustrator)
- Photogrammetry/previsualisation.
- Programming core concepts (python, c++, javascript)

With a background in short film production, I have been working with 3D rendering since 2011, with a particular focus on real time engines since 2014. My focuses were initially on linear narrative pieces, particularly on character animation and blocking. Often being the sole 3d artist within small teams, I have familiarity with many components of the development pipeline including the creation of assets, animation, import workflow, programming and lighting. That said, my core focus remains 'narrative animation' for lack of a better term.

Indeed, the use of UE4 has led me to focus more and more on the use of real time narrative implementations, such as in-theatre projection, real time motion capture, green screen composition or simply more rapid iteration on non-interactive material. I'm lucky to otherwise work in event photography and videography which brings me in contact with many performers keen to try out new and untested concepts, often under quite challenging conditions, many of which are detailed below.

I am well versed in core programming concepts, and able to code in python, javascript and c++ when necessary. Examples include the Unity engine and the use of the openCV and dLib computer vision libraries. With my present focus on UE4 however, I will typically use the node based blueprint language relying on code only where optimal.

Experience

Event photography/videography / Freelance.

Consisting mainly of event photography/videography in theatre performances, headshots or rehearsal sessions requiring familiarity with challenges of capturing unpredictable, fast moving motion in a variety of lighting conditions. Increasingly involves editing of multiple 4K sources of full length theatrical shows filmed with a variety of full frame and crop sensor cameras/lenses.

Moonbase Eco / Technical Artist (solo)

A virtual reality narrative piece for Christian Aid formed of an allegorical sci-fi story based on concerns surrounding internally displaced people. Built over 3 months in UE4, this involved incorporating narrative driven, motion captured performances with player interaction all whilst maintaining performance on mid-range hardware.

'Sonnet 22' / Cinematographer/Editor/Effects

A piece that utilised Unreal Engine environments to allow for an entirely green-screen based short film to be filmed and produced with the span of 48 hours. UE4 allowed the easy reframing and relighting of freely available UE4 interior environments that could be then be easily combined with rendered exterior/landscape shots produced with Sequencer.

Thirteen Cycles / Technical Artist (solo)

A project that utilised the projection of 3D visuals onto the walls/set elements of a series of improvised plays. On stage performers could interact with projections using motion tracking or by moving tracked on-stage props. Required precise mapping of the theatre space through photogrammetry and rectification/placement of 7 overlapping projectors. Photo scans of the theatre were also used to pre-visualise actor scale and audience viewing angles due to severe time restrictions on-site.

Camper Academy / Developer (solo)

An instructional iOS app built with UE4 and employing animations which, in turn, had been captured in UE4 sequencer. This leveraged consumer virtual reality tools coupled with IK rigs in UE4 to quickly record nearly an hour of multi-character animations (albeit highly stylised). The final product had to accommodate the technical requirements of a global retailer including the support of a wide range of hardware whilst keeping package install size within 200mb.

'Originals' theatre poster series / Photographer

The use of real time rendering for rapid experimentation and development of theatre marketing material. Consisting primarily of

poster design using a spectrum of entirely rendered and lit environments/characters, photoscanned performers or composites of traditional photography sessions with 3D rendered backdrops. Often leveraging the post processing pipeline of UE4 (or more conventional compositing) to generate different artistic looks that can be easily reframed for different use cases, as well as to compensate for challenging conditions during the photoshoot.

Education

Aberystwyth University / Film and television Studies (Screenwriting)

Initially I studied a joint honours degree in Film Studies and Mathematics but ultimately graduated with a 2:1 in film studies, with a focus on screenwriting.