JAMES ROBERTS

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Profile

A focused professional with over 12 years industry experience and a deep understanding of complex systems. I specialise in engineering simulation toolkits that represent a broad range of phenomena, including physical, biological and abstract domains, with an overarching goal to model real-world properties within synthetic environments.

- Committed to computing the complexities of the world around us.
- Versatile and adept at harnessing bits and bytes, as I am lenses and optics.
- Recently completed an MSc in Computational Neuroscience.
- Conducted research into the self-organisation of orientation features within the striate cortex.
- Actively seeking a new role that allows me to leverage my multidisciplinary skills and innovate further in the realm of abstract computation or artificial intelligence.

Experience

Technical Director, EPOCH Lab 2018-2022
I led the overall research efforts and decided the engineering road map for production toolkits. Projects included: StyleGAN | SRGAN | Reinforcement Learning | Crowd Behaviour | Dynamic Clustering | Voxel Rendering of MRI Data | PyroFX | Adversarial Attack Methods | DNA/RNA Visualisation.

Effects TD | Lead Artist | On-set Supervisor | VFX Supervisor | Senior Artist, UnionVFX 2012-2018
During my employment at Union Visual Effects, I progressed from Effects TD to Lead Artist before assuming the role of VFX Supervisor/Senior Artist. I was part of the initial FX team assembled for Danny Boyle's London Olympic Opening Ceremony in 2012 and contributed to the company's growth from eight to over a hundred employees across multiple sites. I developed studio-wide tools, worked directly with clients and supervised live-action photography; overseeing projects from concept through to final client delivery.

Throughout these roles, I was a key member in 40+ feature productions, including: Paddington | The Theory of Everything | Everest | Three Billboards Outside Ebbing, Missouri | T2: Trainspotting | The Two Popes | Marvel's Moon Knight | The Banshees of Inisherin.

On-Set Data Wrangler, 21st Century Fox 2012
Effects TD, Peerless Camera Co. 2010-2012
Houdini Internship, SideFX Software 2010

Education

University of Sheffield 2022-2023
MSc (Merit) Cognitive & Computational Neuroscience

Bournemouth University, NCCA 2008-2009
MA (PGDip w/ Merit) Digital Effects

Leeds Metropolitan University 2005-2008
BSc (Hons) Computer Graphics, First Class Honours

High Peak College 2002-2004
BTEC Information Technology & A-Level Graphic Design

Lady Manners School 1997-2002

Technical Knowledge

Computer Graphics	Neuroscience	AI / ML	Languages
Houdini	Cortical Self-Organisation	PyTorch	Python
Nuke	Laplacian Associative Memory	NumPy | Pandas	VEX (Shader Writing)
Raytracing	Hopfield Networks	Transformer | GAN | Backprop	C++
Photogrammetry	Reinforcement Learning	Differential Equations	Shell | BASH
Lenses | Optics	Recurrent Neural Networks	Graph Theory	LaTeX

While exploring the world of computer graphics, I have found the theory behind the production of commercial artwork is of equal importance, leading me to spend time in R&D departments and academia. In my spare time, I work on a high-altitude radiosonde program which aims to provide an open-source platform for collecting real-world atmospheric data.

References

Adam Gascoyne
Founder, UnionVFX

Dr Stuart Wilson
Senior Lecturer - Computational Neuroscience,
University of Sheffield