Rob Homewood

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STATEMENT

With a passion for harnessing real-time 3D technologies, creative expression, and leadership, I thrive in collaborative environments where diverse perspectives come together to drive innovation. C# and Unity3D form the core of my expertise, and I am driven by the opportunity to learn from others, share knowledge, and contribute to projects that challenge me to grow both technically and creatively.

SKILLS

Programming: C#, Unity3D, Python, C++, JavaScript, WebGL, Web Development
Experience: Programming, Leadership, Teamwork, Public Speaking, Production, VR
Interests: Music Performance, Film Making, Tech/Business History, Economics

EXPERIENCE
(project titles linked)

3Dctrl.com (Unity3D - Application)   2019 - Present

- Senior Developer for a scalable real-time 3D content production toolkit.
- Key Impacts:
    - Development and maintenance of core real-time software systems.
    - Created a powerful renderg solution capable of outputting various formats.
    - Developed a bespoke git2libsharp based system to manage 450gb+ library.
    - Implemented Addressables content build pipeline to improve scalability.
    - Performance optimization throughout the product lifecycle.
    - Advising senior management on technology trends and strategy.
- Systems Developed:
    - Deterministic product-configurator variant management system.
    - Intuitive camera control systems for animation rendering.
    - Rendering optimizations and improvements.
    - Content management and deployment pipelines.
    - Web-to-Unity communication API.
    - Animation systems tailored for real-time environments.
    - Artist tool development to streamline production workflows.
    - UI systems for internal development use cases.
    - Adaptive performance systems for optimized resource use.
    - Bespoke rendering pipelines to accommodate client visualization needs.
    - Frontend Sketchfab integration.

Sweet Dreams (Unity3D - Sundance Film Festival)   2018 - 2019

- Sweet Dreams VR Narrative. Programmer - Marshmallow Laser Feast.

Ethereum DevCon '18 (Unity3D - Artwork Installation)   2018

- Ethereum Visualisation. Programmer. - Marshmallow Laser Feast.

EDUCATION	*PhD Intelligent Games and Games Intelligence* *(Incomplete)*	2015 - 2022

EDUCATION

PhD Intelligent Games and Games Intelligence *(Incomplete)*   2015 - 2022
Goldsmiths, University of London, UK (primary institution)
- University of York, UK
- Queen Mary, University of London, UK
- University of Essex , UK
   • Procedurally personalised game content and aesthetics

Msc (Informatics), Serious Games *(Incomplete)*   2014 - 2015
Högskolan i Skövde, Sweden
   • Applied Knowledge Space Theory for personalised learning in games

BA (Distinction), Game Design & Production Management   2010 - 2013
University of Abertay, Dundee, UK (primary institution)
- George Mason University, VA, USA

PROJECTS

Film / Music Videos *(Chemically Sinister Productions)*   2019 - 2024
- Voodoonaut - Feature Film. Associate Producer, Audio Mixing
- Strike Up The Band - Colossus. Video editing, Co-producer, Performer
- Our Blood - Stash Magnetic. VFX & Compositing, Creative Consultancy.
- Dark Days - Coldin Berlin. Camera operation, VFX, Creative development.
- The Power - Coldin Berlin. Lighting, VFX, Creative development.

Wordpress REST Migrator *(Python - PC - Tool)*   2018
   • Tool for migrating Wordpress sites via REST api. Open source solo project.

Colossus *(Band)*   2004 - Present
   • Punk-blues band. Bassist, Backing vocalist, Co-writer.

PUBLICATIONS

Research Article: Billing, E., 2020. The DREAM Dataset: Supporting a data-driven study of autism spectrum disorder and robot enhanced therapy. Available Online.

EU Deliverable: Billing, E., 2017. D3.4.3 System Integration Progress Report. DREAM - Development of Robot-enhanced Therapy for Children with Autism Spectrum Disorders. Available Online.

PUBLIC SPEAKING

Creating VR/AR game content with Unity3D   2018
Digital Economy Network Summer School, Bournemouth, UK

Personalising Game Aesthetics with Social Network Data   2018
Digital Economy Network Annual Meeting, Digital Catapult, UK

Digital Games as a Career Path   2017
ADMI(African Digital Media Institute), Nairobi, Kenya

Approaches to Personalised Aesthetics   2017
Falmouth University, UK

Between: Project description   2015
Intel Buzz, Impact Hub London, UK

Artists Panel   2015
ICIDS Copenhagen, Denmark