ALEX MOED | RESUME

AI Researcher and 3D Environment Generalist

Fields: Machine Learning, 3D Environment Artist, Computer Vision
Tech: Pytorch, Tensorflow, ComfyUI (incl. LoRAs), Sklearn, Python, Houdini, Unity, Gaussian Splats
Education: MSc AI for Media, Bournemouth University (Distinction)

alexmoed@gmail.com
UK Graduate Visa (valid till 2028)
USA & Canadian Citizen

Summary

AI Researcher with a Master's in AI for Media (Distinction) from Bournemouth University with over a decade of visual effects experience in episodic TV, advertising, animation, and feature films. Building on a foundation in procedural environment generation, modelling, and lighting and advancing to Senior 3D Environment Generalist TD. Worked on award-winning teams for Dune: Part Two (Oscar) and The Last of Us (Emmy). Now at Volustor, developing volumetric capture pipelines. Focussing on Gaussian splat segmentation and multi-camera processing. Training 3D instance segmentation models and building pipelines using vision language and segmentation models for automated metadata tagging, spatial search, and quality control.

Experience

Artificial Intelligence Researcher - Volustor, London, UK   Sep 2025 - Present

· Developing machine learning methods for volumetric asset management in film production, funded by a UK Research and Innovation Grant

· Matching objects across non-sequential multi-camera frames using Qwen embeddings and reranker

· Segmenting matched objects with SAM3 and projecting masks into 3D via COLMAP to extract assets from volumetric scans

· Establishing quality control pipelines to detect blurry frames, incorrect orientation, and other capture issues

· Extending dissertation research on 3D segmentation and scene understanding through additional experiments and industry benchmarking

· Proposing data strategies for training acquisition and exploring methods to leverage production data for AI training

· Prototyping ML workflows in ComfyUI and deploying quantized models (4-bit, 8-bit) via vLLM and BitsAndBytes for production inference

· Using locally hosted LLMs to validate object detection and identification results

Senior Environment Generalist TD - Double Negative (DNEG), Vancouver, CA   Feb 2022 - Feb 2024

· *Shazam! Fury of the Gods:* Generated procedural roots growing up buildings based on hand-drawn guide curves.

· *Last of Us:* Designed procedural setup for detailed destroyed beams scattered across multiple sequences. Worked on destroying buildings, fracturing walls/windows, collapsing floors. Team received Emmy Award for best VFX in a series.

· *Dune 2:* Optimized models from Dune: Part One, created rock configurations, and generated layouts and scatter for dunes and rocks. Did layout and placement of footprints to ensure continuity.

· *Fighter:* Enhanced low-res scan models of mountains to photorealistic quality. Used AI to upscale satellite textures and remove shadows. Created procedural setups generating unique rock formations resembling real locations worldwide.

Senior Environment Artist - Digital Domain, Vancouver, CA   Oct 2020 - Feb 2022

· *Loki:* Building and bridge modelling, scene layout, procedural rock and ground generation.

· *Dr. Strange Multiverse of Madness:* Modelled buildings, procedural scattering/fracturing, environment layout, ground look dev. Mentored junior artists.

· *Black Adam:* Converted environment to new Solaris pipeline. Adapted models and textures for USD-based workflow.

Lighting and Compositing Artist - Goldtooth Creative, Vancouver, CA   Jul 2020 - Oct 2020

· *Marvel Realm of Champions:* Lighting and compositing of characters and environments for video game trailer.

Environment Artist - Digital Domain, Vancouver, CA   Oct 2019 - Apr 2020

· *Free Guy:* Modelling, texturing, and look development for interior and exterior environments.

Environment Artist / Lighting Artist - MPC, Vancouver, CA   Feb 2018 - Oct 2019

· *Skyscraper:* Look dev and render optimization for 50+ animated frosted glass panels.

· *Detective Pikachu:* Layout of Ryme City hero sections, asset organization, modelling and look dev.

· *Maleficent 2:* Lighting design for armoury sequence, full CG environments and set extensions.

· *Sonic The Hedgehog:* Lighting/rendering large scale environments, characters, vehicles. Texturing for full CG highway.

Lighting, Rendering & Compositing - Bardel Entertainment, Vancouver, CA   May 2017 - Sep 2017

· *Monster High:* Adjusted lighting to match approved keys, created render layers, troubleshot rendering issues. Assembled comps with colour corrections, roto painted fixes to remove geometry crashing.

3D Artist - Odd Machine, Chicago, USA   Jul 2013 - Nov 2016

· Participated in client meetings and bid preparation. Created rigid body simulations. Worked with industrial designers on CAD to Maya workflow.

· Designed and built in-house render farm with 45 servers. Upgraded file server infrastructure.

Freelance 3D Generalist - The Mill, Chicago, USA   Mar 2013 - Apr 2013

· Learned proprietary pipeline and shot management systems. Helped UV and convert previs models into production for Dave and Buster's commercial.

Freelance 3D Generalist - Hoax Films, Los Angeles, USA   Jan 2013 - Feb 2013

· Lighting for medical visualization and a public service ad.

Lighting Artist - Comen VFX, Santa Monica, USA   Jun 2012 - Jul 2012

· Worked on lighting for a feature film bid *Out of the Furnace*.

Mesh Tracking Artist - Entity FX, Los Angeles, USA   Aug 2011 - May 2012

· *The Vampire Diaries:* Mesh tracking skin of live action actors using proprietary tools for episodic TV. Match moving 3D models into live action plates.

Education

MSc Artificial Intelligence for Media - Bournemouth University, Poole, UK   2024 - 2025

· **Grade:** Distinction

· Degree awarded by the National Centre for Computer Animation. The program is designed to leverage visual effects experience while building machine learning skills.

· **Master Class:** Industry partnership with Volustor researching Gaussian splat segmentation. Surveyed methods including SAGA, Gaussian Grouping, and FlashSplat. Built SAM2 and MatAnyone pipelines for 2D video segmentation. Created a point classification pipeline using SpatialLM bounding boxes and Open3D.

· **Dissertation:** Combined the SONATA encoder with the PointGroup instance segmentation head to segment Gaussian splats. Trained models on RGB-D data that generalized to Gaussian splats via augmentation and training strategies.

BFA Visual Effects - Savannah College of Art and Design, Savannah, USA   2007 - 2011

· **Grade:** 3.33 GPA

· Recipient of SCAD's Portfolio Scholarship.

· Trained as 3D generalist skilled in lighting, texturing, and compositing.

· Foundation studies included traditional art, art history, and general education.

Creative Coding Short Course - University of the Arts London, UK   2024

· An online introduction to programming and processing in the area of visual arts and design.

Python Programming Immersive - Noble Desktop, New York, USA   2024

· Python intensive boot camp.

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