# Aaron Smith

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## WORK & LEADERSHIP EXPERIENCE

**Coffee & TV** **London, UK**
*Head of Research & Development* May 2024 - Present

- Developed annual R&D strategy for creative technologies and projects
- Led creative and technical projects, participating in client account bidding and pitching to delivery
- Cultivated partnerships with technology vendors and educators, using appropriate subsidies to provide entire teams of artists with code-based creative upskilling
- Architected a custom semantic Houdini data pipeline for training language models
- Developed full suite of integrated AI capabilities for VFX pipeline
- Developed suite of 50+ CG tools, implementing latest research
- Presented research to Omnicom at a C-Suite level, ran interactive demos for management

**Rebelway** **London, UK**
*Program Writer & Instructor* January 2024 - April 2024

- Created the 'VEX for Houdini Artists' course, presented over 10 hours of tutorial footage

**Freelance @ aaronsmith.tv** **London, UK**
*Lead Houdini TD & Developer* March 2020 - May 2024

- Led various creative, commercial and software projects, collaboratively working with cross-functional teams at studios such as Ditroit, The Mill, Glassworks, Framestore, Field.IO, Coffee & TV
- Won a Royal Television Society Craft Award for *Lions Series: South Africa 2021*

- Started **lobster.dog**, an interactive AI driven tool using a custom language model trained on Houdini's VEX language and practical use cases
    - Created and managed AWS infrastructure for servicing 500+ users with >99.9% uptime
    - Regularly interviewed users and held open forums for customer feedback

- Started **1minutevex.com**, a site dedicated to helping experienced artists learn Houdini's VEX language at an advanced level

**Glassworks VFX** **London, UK**
*Senior Houdini TD* February 2018 - March 2020

- Worked on a multitude of creative projects, leading and directing commercials for various agencies
- Developed Houdini artist tools and CG lookdev workflow

**Framestore** **London, UK**
*3D Generalist* November 2016 - February 2018

**MBA** **London, UK**
*3D Generalist* September 2016 - November 2016

**Blue-Zoo Animation Studio** **London, UK**
*3D Intern* July 2016 - September 2016

## OPEN SOURCE PROJECTS

**Houdini Docker**
*https://github.com/aaronsmithtv/Houdini-Docker*

- Containerized Houdini Docker image for usage as a server pipeline integration
- CI/CD workflow using GitHub actions for creating, uploading and validating the image
    - Houdini task and server deployment based testing
    - Public workflows create a high degree of transparency and trustworthiness, allowing the Docker images to be studio friendly
- Used throughout the industry, by VFX studios (such as **ReDefine**) needing to deploy Houdini with Docker, or AI driven companies such as **Mythica** and **Google** (in 2023) for automation tasks

**HPaint**
*https://github.com/aaronsmithtv/hpaint*

- Won Gold in the SideFX Labs Tech Art Challenge (2021) in category ‘Best Houdini Utility’
- Python viewer-state implementation of 3D painting in Houdini, similar to Blender’s Grease Pencil
- Used at studios such as **Tumblehead** for 2D animation and 3D texture application

**Nuke ONNX Inference Engine**
*https://github.com/aaronsmithtv/Nuke-ONNX*

- An open sourced Nuke ONNX runtime implementation used in Coffee & TV’s Nuke toolkit, used for style transfer and depth estimation
- Efficient NDK (C++) open neural network standard implementation in Nuke

## EDUCATION

**Arts University Bournemouth** — **Bournemouth, UK**
*BA (Hons) Animation Production (1st Class Honours)* — 2013 - 2016

**South Essex College** — **Southend-on-Sea, UK**
*fDA Art & Design (Level 4 Diploma)* — 2012 - 2013

## SKILLS

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|---|---|
| **Software** | Houdini, Nuke<br>○ Creative procedural systems design for visuals<br>○ Algorithmic implementations and research<br>○ Tool, pipeline and HDA creation<br>○ Mentoring and education |
| **Programming Languages** | Python, VEX, C++ (NDK, HDK), JavaScript |
| **VFX Software** | HOM (Houdini Object Model), NDK (Nuke C++ SDK) |
| **AWS** | Architecture, deployment, scaling |
| **Web Technologies** | React, Next.js, MongoDB |
| **Development** | Git, GitHub Actions, Docker |