

Electric Fish

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Atelier I: Discovery DIGF-2014-001

Electric Fish is a compilation of distorted underwater footage created by artificial intelligence. The concept was to take inspiration from Atlantic alien landscapes, a composition of swaying currents atop mossy, rich corals, and amplify these enigmatic effects in organic and generative ways. This is achieved with ml5 Style Transfer, where an AI system is trained to read and apply style markings. Individual frames highlighting texture, repetition, and colour, were chosen as base imagery to train style models. These models were then applied back onto the footage; in essence, the footage multiplies itself. The organic elements are intensified by AI studied on the very same, grounding the distortion into acidic scenes of magical realism.

More technically speaking, Electric Fish draws upon the basics of ml5 Style Transfer with the addition of several adjustments. The footage and models are original content, the latter created using Terminal and Spell. run. The Video Style Transfer was modified to work with an uploaded video instead of a camera filter, but it was clear early on that this method would not suffice. Moving imagery was harder to detail a style upon, and they produced choppy cuts. This is when I opted to use Image Style Transfer, where I modified ml5's example code to cycle through and individually transfer style onto jpeg frames. The converted pictures are then recompiled with ffmpeg into a video format in Terminal. Technical difficulties arose from the CPU and GPU memories reaching capacity. My computer couldn't produce larger images, or at least many small images efficiently, which lead to a very slow production rate. Ideally, I would have liked to have created more videos that were larger, longer, and of higher quality, however, overall I achieved what I set out to do, and I'm proud of the finished result. I plan to keep experimenting with more videos and model combinations, and develop this piece into an installation.



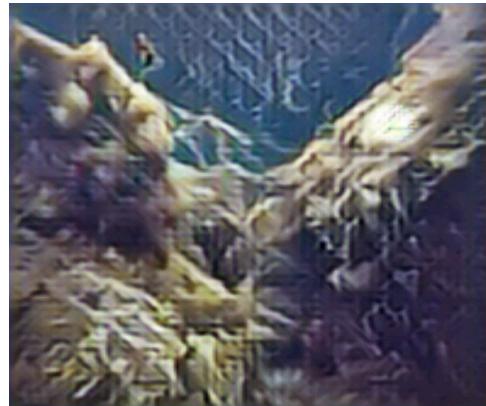
Code: <https://github.com/kahaniiploessl/Atelier-Project-2-Code>

Repo includes: Video Style Transfer sketch, Image Style Transfer sketch, one (out of six) models, one GoPro file, a folder of pre-stylized frames, and the final video (good copy), and this pdf.

Progress Videos:



<https://youtu.be/fPM7zfl-Ge4>



<https://youtu.be/VPXO9x1aVDU>



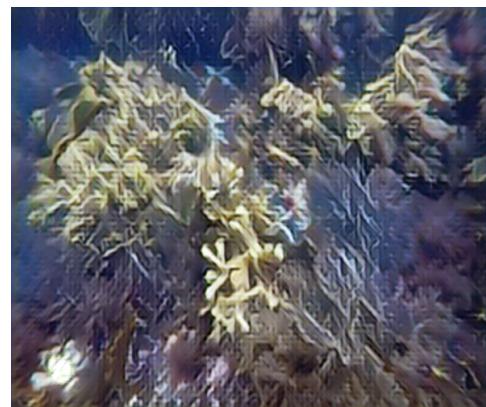
<https://youtu.be/zGuAMPU-oPY>



<https://youtu.be/uZ-D8lzdZYI>



<https://youtu.be/ZL4nfwoUl2A>



<https://youtu.be/t9weFHHQ3yo>

Final Video:

<https://www.youtube.com/watch?v=l8SqBVrRVE0> - low quality, high quality video in git repo

