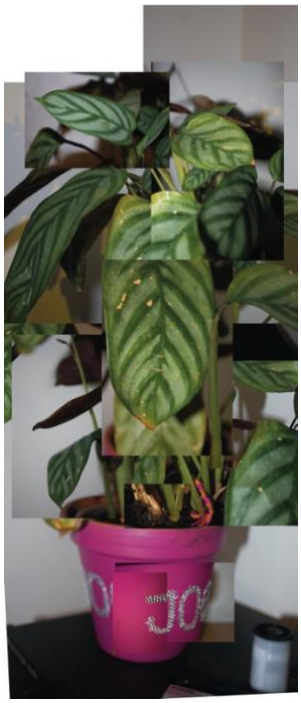
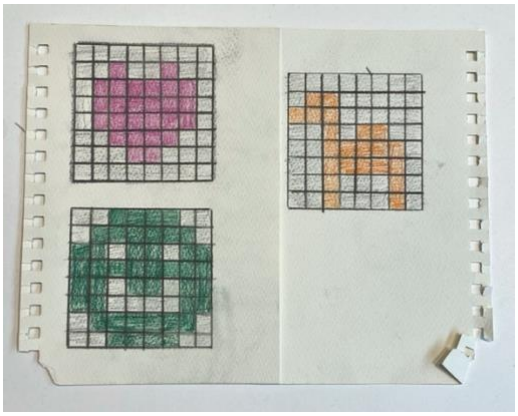
Joe’s Lifeline



YouTube Link: https://youtu.be/Ur756rxcZTg

Joe’s Lifeline line is an expansion of a project I have been working on for a couple of years. It all started as a joke between friends that I paid more attention and love towards my pot plant Joe than to romantic partners. I learned through this project that I have PTSD from an old relationship. Joe represents my journey, and he has since become my theoretical boyfriend. Inspired by ecofeminism and women’s relationships with nature, he is part of my healing. Joe is a Calathea and requires a lot of maintenance, Joe’s lifeline represents the care he must receive, seeing Joe and his soil as an interface is crucial to this project. If I can use Joe’s soil to communicate with him and assess his needs, then I can deepen my relationship with him to make our partnership more of a collaboration. Joe’s Lifeline consists of two entities, The soil moisture sensor and the weather app. Joe’s soil is the interface which allows me to connect with him and understand his needs allowing me to keep consistency when caring for him and ensuring growth to flourish. Using physical computing to deepen my connection with Joe, allows for a two-way conversation that hasn’t been viable before, understanding the soil moisture data as dialogue.

In my practice, I am heavily influenced by Ecofeminism, books like ‘Why Women Grow’ and the work of ecofeminists Agnes Denes, Denes often uses plants in her work as a political statement. In Why Women Grow Alice Vincent explores the complicated relationship between sisterhood and gardening, telling personal stories of women, soil, and growth. Ecofeminism is often overlooked as a movement started in the 70s but in 2018 artist Kasia Molga created ‘By the Code of Soil’, it was a networked, data-driven artwork in the form of a harmless computer virus. It was activated once the Sentinel-1A satellite passed over the computer’s location. ‘When the virus was active - it took over a user’s computer for around 2 minutes, displaying an artistic representation of soil moisture, temperature and light data from the cluster of soil sensors in the place closest to the participating computer. Molga’s work uses soil in such an interesting way creating a virtual connection with the user and the soil around them. I think the virus is a beautiful way to connect with the human operating the computer to remind them to be grateful for the earth around them.



I began this process by linking a soil moisture sensor with an Ada Fruit Pixel Matrix. Calculating when his soil is too dry, overwatered and just right, I created bitmap illustrations to represent these phases. A camel for when I need to water him, a smiley face for when he is well watered and a heart for when I have just watered him. I also 3D printed a casing for the pixel matrix to be cohesive with Joe's aesthetic, although we can't be certain of Joe's self-awareness, he is very particular about his outward expression and to create a fully cohesive piece. Once this was functioning, I started to work on Joe's weather app. This is crucial as London tap water is full of chemicals that can be dangerous to plants, fluoride toxicity causes browning and burning of leaves and excessive salt build-up can lead to root rot in house plants. The weather app is connected to an open API which tracks rainfall and UV rates in London from https://open-meteo.com/. The weather app takes the values from the API and tells the user to collect rainwater or move Joe to benefit him. I also included daily affirmations for Joe so that when I check the weather, I can also build up Joe's self-confidence. All these elements aim to improve my ability to care for him and create an enjoyable way to interact with our household plants.

Reflection: Overall I think this project was very successful. I'm very happy with everything technically, the app works effectively, and the soil moisture sensor is very responsive. If I were to complete this project again, I would connect the app and the soil moisture sensor, using the data inputs to create generative art. This would then make the soil interface a drawing tool and we could create artwork together. This would push the idea of soil being an interface even further. I also would test different screens instead of the pixel matrix, although effective I think there is more creative freedom with more detailed screens. It would be fun to experiment with different soil types as well, more and less absorptive kinds and see how that would affect the sensor. I think creating a personal UV rating for the plant would be more effective as well because then you could place the plant in premium positioning affected by window-facing and dispersion of light in the home.

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