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Preserving disappearing cultural practices with Artificial Intelligence

Countless old drystone walls can be found on the Croatian coast and islands. On the island of Krk, these even grew into eye-catching "stone flowers." Known as Mrgari, they were used for holding sheep. These structures once defined the landscape, but today they are falling into disrepair and it is only a matter of time before they vanish. Digital AI-based technologies are therefore being used to document, conserve, and (re)construct them, but also to reinterpret and transform them artistically.

A complex 3D model of the stone structures was generated from thousands of drone photos. Initially, a process known as Photogrammetry was used for this. However, now, an upcoming technology called Gaussian Splatting, which is based on Artificial Intelligence, is tested. This makes it possible to capture not only the geometry and textures, but also atmospheric aspects – you can see the glaring sunlight, the bright blue sky and the sea sparkling in the distance.

A so-called LoRA model based on Stable Diffusion was then trained from the photos initially intended for the 3D reconstruction. This makes it possible to generate speculative Mrgari. A cultural practice in decline can thus be kept alive using Artificial Intelligence, at least virtually. And perhaps this will serve as a seed from which new, physical Mragi could emerge one day...

The project was exhibited at the House of Art in Ústí nad Labem, Czech Republic and the Schafhof - European Art Forum Upper Bavaria in Freising, Germany and will soon be on show at the Museum of Fine Arts in Split, Croatia.

Further information about tthe project: www.alexisdworsky.de/mrgari.pdf