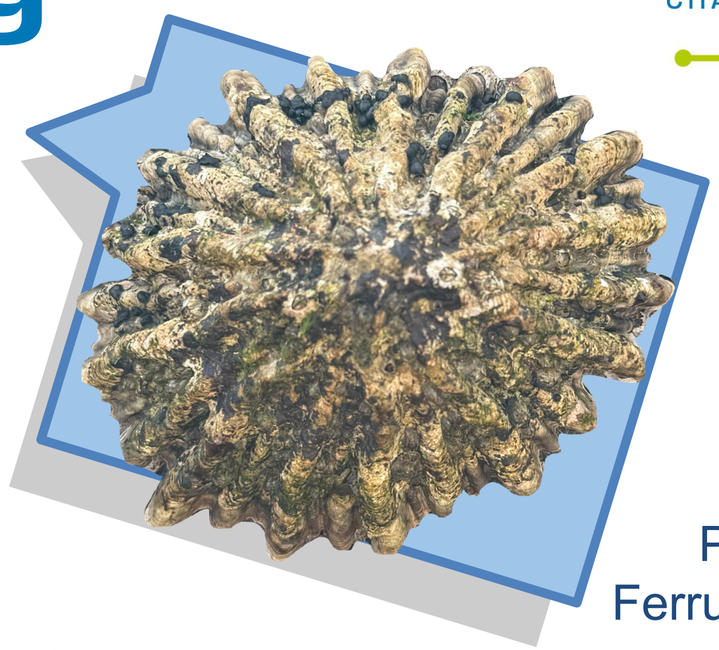
Alejandro Cabello Espinar | La Inmaculada | Algeciras | Spain

Saving Patella Ferruginea with Machine Learning

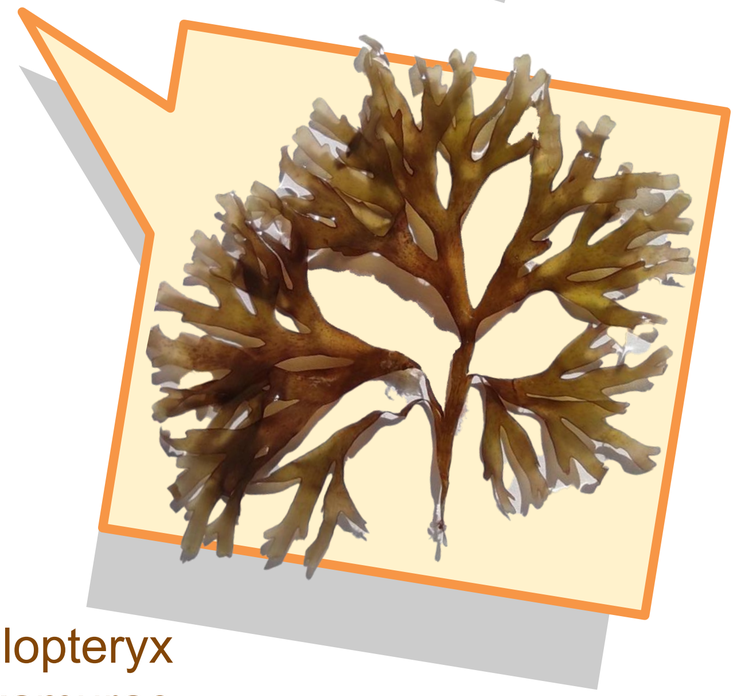
AI in STEM CHALLENGE

This project, developed in Algeciras (Strait of Gibraltar), **aims to protect the endangered limpet Patella Ferruginea** from the invasive seaweed Rugulopteryx okamurae **using AI-based monitoring**.



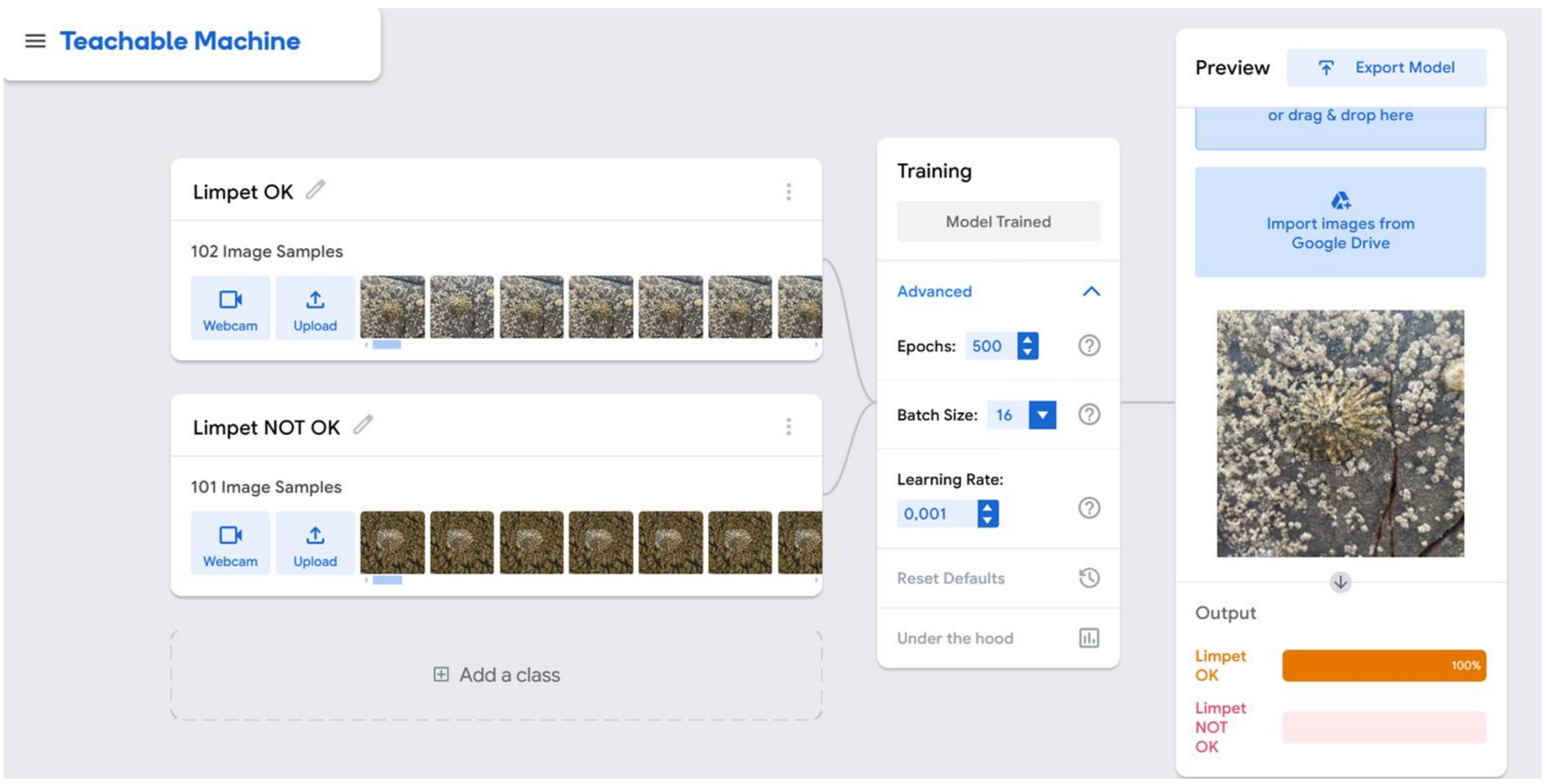
Patella Ferruginea

An **autonomous monitoring system** that activates every 24 hours **captures images** of the area **where the limpet lives**. These images are **processed** on a Raspberry Pi **through a Machine Learning model** trained in Teachable Machine, then identifies the limpet and assesses potential threats from the seaweed.



Rugulopteryx Okamurae

If a **risk is detected**, an **automated email attaching the image is sent** for conservation monitoring.



Trained Machine Learning model using Teachable Machine. Two datasets of images were used to determine the conditions near Patella Ferruginea.

The successful development of this system highlights the potential of innovative solutions in safeguarding biodiversity and promoting sustainability in marine ecosystems.

AI in STEM Challenge is supported by amazon future engineer

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