**Mounting an AGX Orin onto a Reachy Robot**  
*by Adam Parsons*

This project focused on integrating the NVIDIA Jetson AGX Orin Developer Kit with the Reachy robot to expand its computational power. The work combined programming, mechanical design, and 3D modelling into a complete solution.

I began by learning the capabilities of the Reachy robot through its documentation and practical experiments, such as teleoperating it with an Xbox controller and testing arm movements and moving the robot around the room using waypoints. I also explored the Jetson AGX Orin and prepared it with the necessary software (Python, ROS 2, and the Reachy SDK) to communicate effectively with Reachy. Establishing a reliable Ethernet-based connection ensured smooth interaction between the two systems.

A significant part of the project involved designing a custom 3D-printed mount to physically attach the AGX Orin to Reachy’s base. Using CAD software (Onshape), I created a four-part holder consisting of a tray, two clamp pieces, and legs. This design allowed the Orin to be securely mounted while maintaining easy access to ports and avoiding interference with Reachy’s LIDAR sensor. A portable battery system was also integrated, providing the Orin with independent power.

The final outcome was a complete step-by-step integration guide (as seen on the poster), covering both software setup and physical assembly. This project demonstrates how advanced computing platforms like the Jetson AGX Orin can be combined with humanoid robots to enable more complex behaviours and future research applications.