Project Brief: AI & Depth Vision Challenge

Overview
This challenge invites you to explore the exciting intersection of **AI, depth sensing, and RGB imagery** using the **Intel RealSense camera**. Your task is to create a **creative and visually engaging demo** that leverages depth and RGBD data in an innovative way. The final demo is aimed to be displayed on a **table setup during Open Day**, designed to catch the attention of passersby with cool, real-time visualizations.

Participation Details
- You **don't need to be at campus** during development - you can work fully remotely using **online datasets** to build your concept or model.
- In the **first week of Block D**, we will schedule time for you to **run and test your project using the Intel RealSense camera** provided.
- Should you want to record your own data using the depth camera, I will be available on Monday the 14th of April from 9 to 3pm (Unfortunately due to limited cameras, you may not take it home.) Additionally, I will be availble other days, upon significant request)

Project Requirements
Your project will be evaluated on three main points:
1. **Creativity**
    a. Is your idea unique and visually engaging?
    b. Does it spark interest and stand out to viewers?
2. **Functionality with Dataset / Demo**
    a. Does your concept work with an online dataset or simulation?
    b. Have you demonstrated it running effectively in your own setup?
3. **Successful RealSense Integration**
    a. Is your final version successfully running on the RealSense camera?
    b. Does it demonstrate your idea clearly during the live Open Day demo?

Delivarables
You must submit the following at the end of Week 10:
- Project Code / Notebook (e.g., Jupyter Notebook, Python script, or equivalent)
    - Include all relevant files and dependencies needed to run your project.
- Short Demo Video (approx. 15 seconds)
    - Showcasing your concept running with either dataset input.
- Live Camera Demo
    - You will be assigned a time slot in the first week of the block to run your demo using the Intel RealSense camera provided.

Tools & Support
- **Intel RealSense Depth Camera**
  Please read the documentation and requirements:
  https://www.intelrealsense.com/depth-camera-d457/
- Use any tools, libraries, or frameworks that support your vision (e.g., OpenCV, PyTorch, TensorFlow, Unity, etc.)

Your Goal
Create something fun. Something weird. Something impressive. Whether it's gesture tracking, 3D scene generation, AI-driven artwork, or real-time object interaction
Make people stop and say, "That's awesome!"