# FMP
# Final Crit

# 造罪之時

*The Time of Sin*

**Presented By**

**Hsiao-Wen Chen**

# Project Overview

## Narrative/Experimental Theme

**Physical Computing**

Physical Computing allows real-world actions to affect digital systems. Through sensors and tangible interfaces, users can trigger narrative changes, increasing engagement and transforming passive viewers into active participants within interactive storytelling experiences.

**XR (Extended Reality)**

XR creates immersive environments using VR, AR, and MR. It surrounds users with interactive digital elements, enhancing emotional connection and enabling deeper narrative exploration through full sensory engagement in a virtual or hybrid world.

# Research question

**Why do we try to understand real historical trauma through a medium that is artificial—like VR?**

- Baudrillard’s theory of hyperreality
- Hirsch’s concept of postmemory
- Landsberg’s idea of prosthetic memory

# The Time of Sin

## Story Outline

In the **1950s**, Taiwan was at the height of the **White Terror** era. You are an ordinary person who enjoys reading and critical thinking, occasionally exchanging political views with classmates. One day, after finishing a book at the school library, you are suddenly arrested by the police and taken to a cold, dimly lit interrogation room, furnished only with a table, chairs, and a polygraph machine.

In the interrogation room, a single lamp shines directly onto your face. Across from you sits an investigator from the **Ministry of National Defense's Investigation Bureau**. He begins asking you a series of questions.

Your hands are connected to a **polygraph machine**. Changes in your heart rate trigger different reactions from the agent. For example, if your heartbeat remains steady, the agent speaks calmly and pretends, "Tell the truth and we'll let you go." If your heart rate quickens, the agent becomes aggressive: "You're nervous–what are you hiding? Are you a Communist Party spy?"

# STRUCTURE

1 Title

2 BG History

3 Kidnapped Animation

4 Interrogation Room

Trigger different conversations

Couples of questions

→ **Core Mechanics**

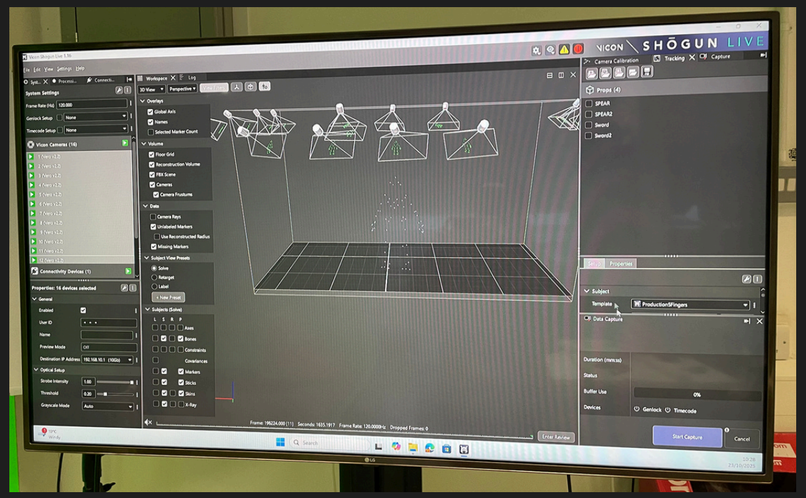
Wearing a polygraph machine

5 END Video

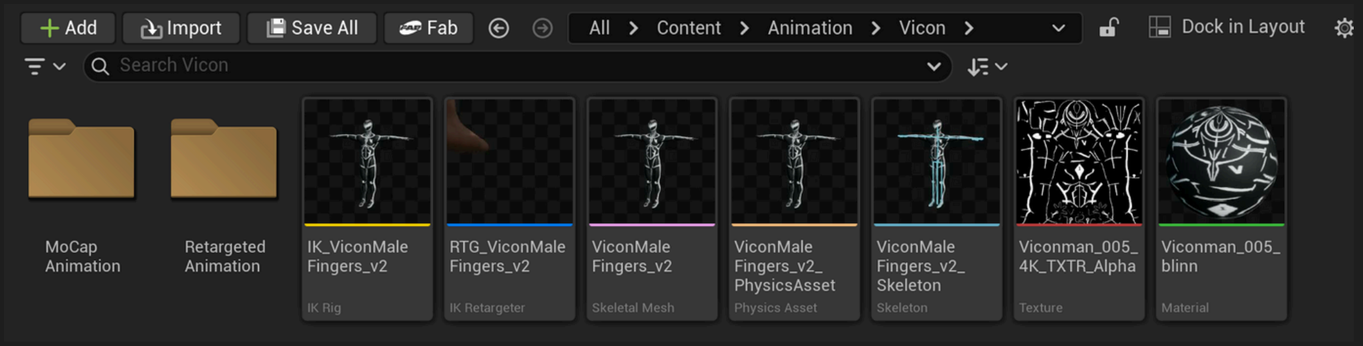
The epilogue is about how many political prisoners are still imprisoned today.

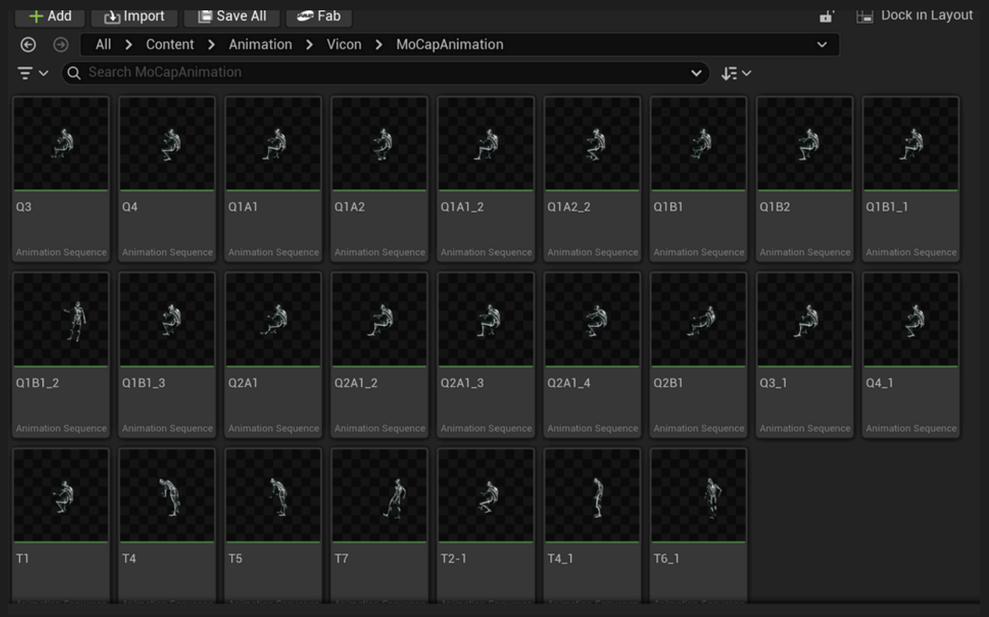
# Animation

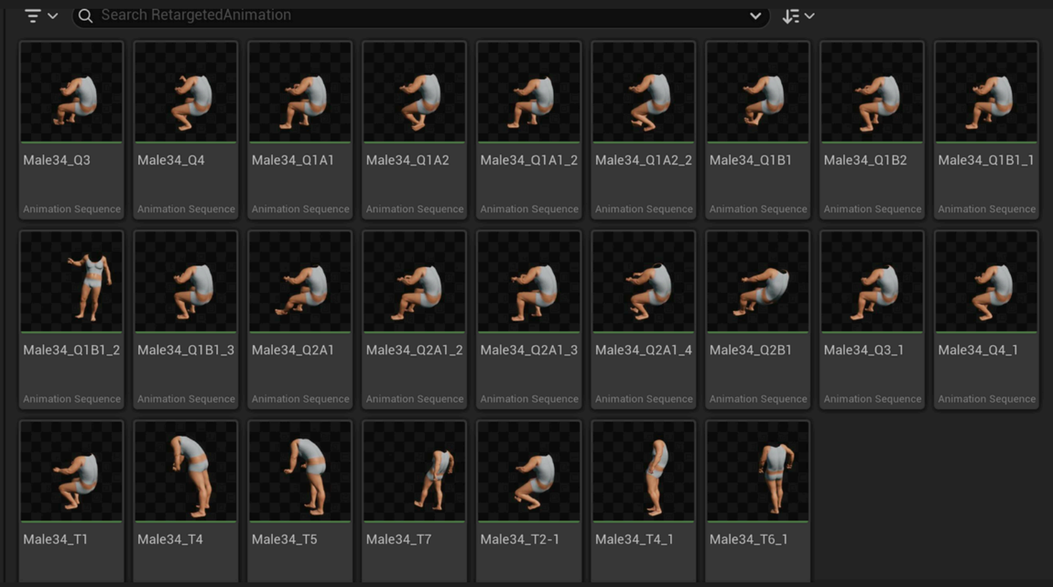
## Mocap


# Retargeted Animation in UE5

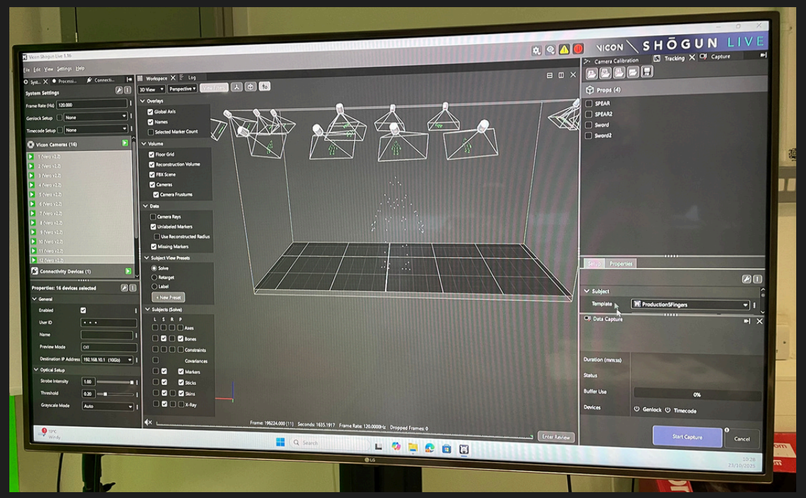


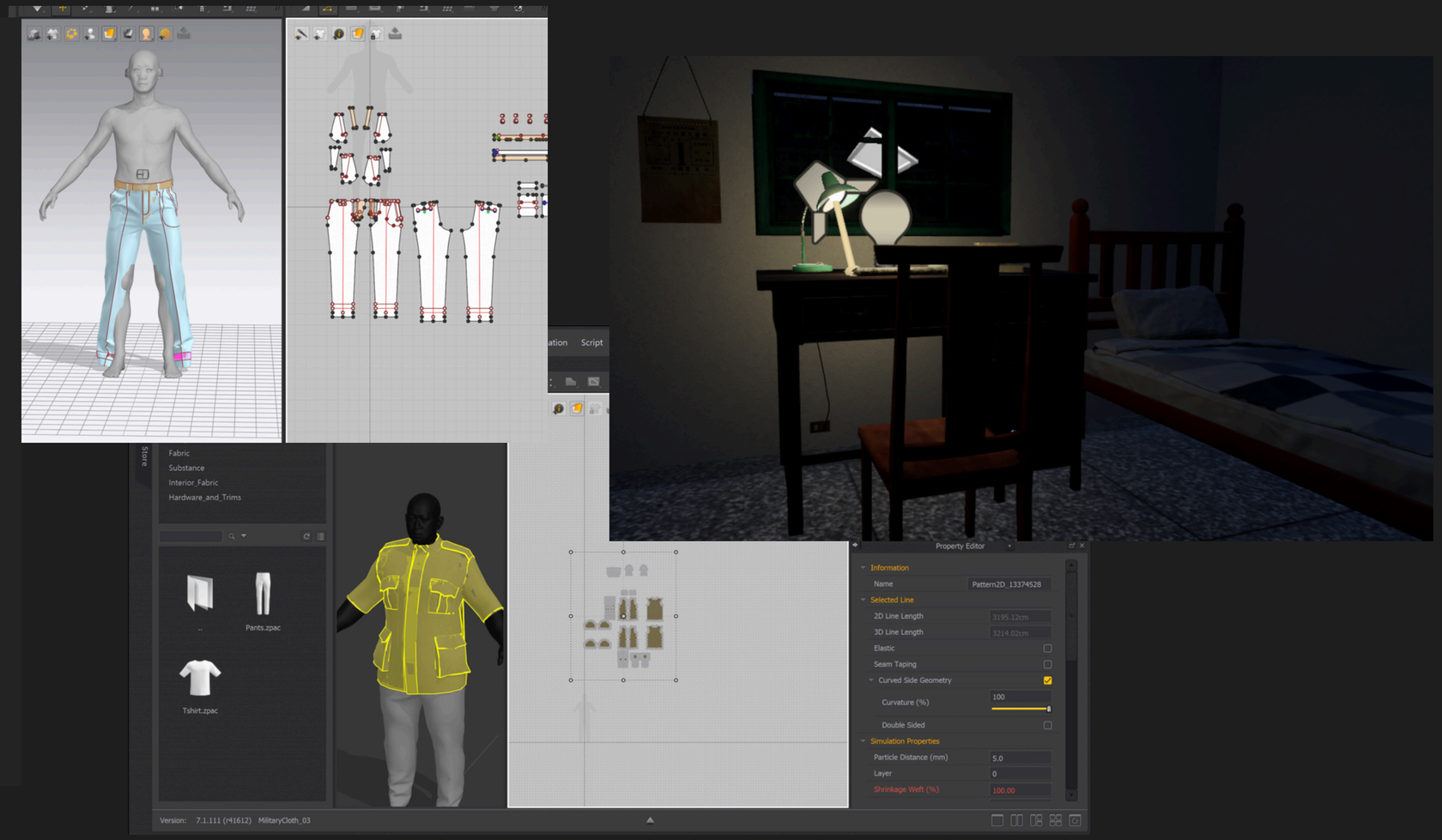



# Animation

## Mocap

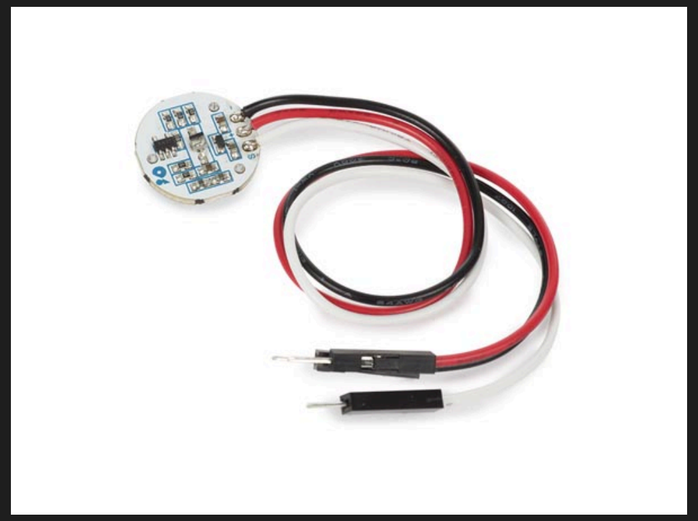




# Modeling & Surfacing



# Physical Computing

## Arduino



Heart Beat Sensor

Ear-clip Heart Rate Sensor

sketch_nov14a | Arduino IDE 2.3.6

File Edit Sketch Tools Help

Select Board

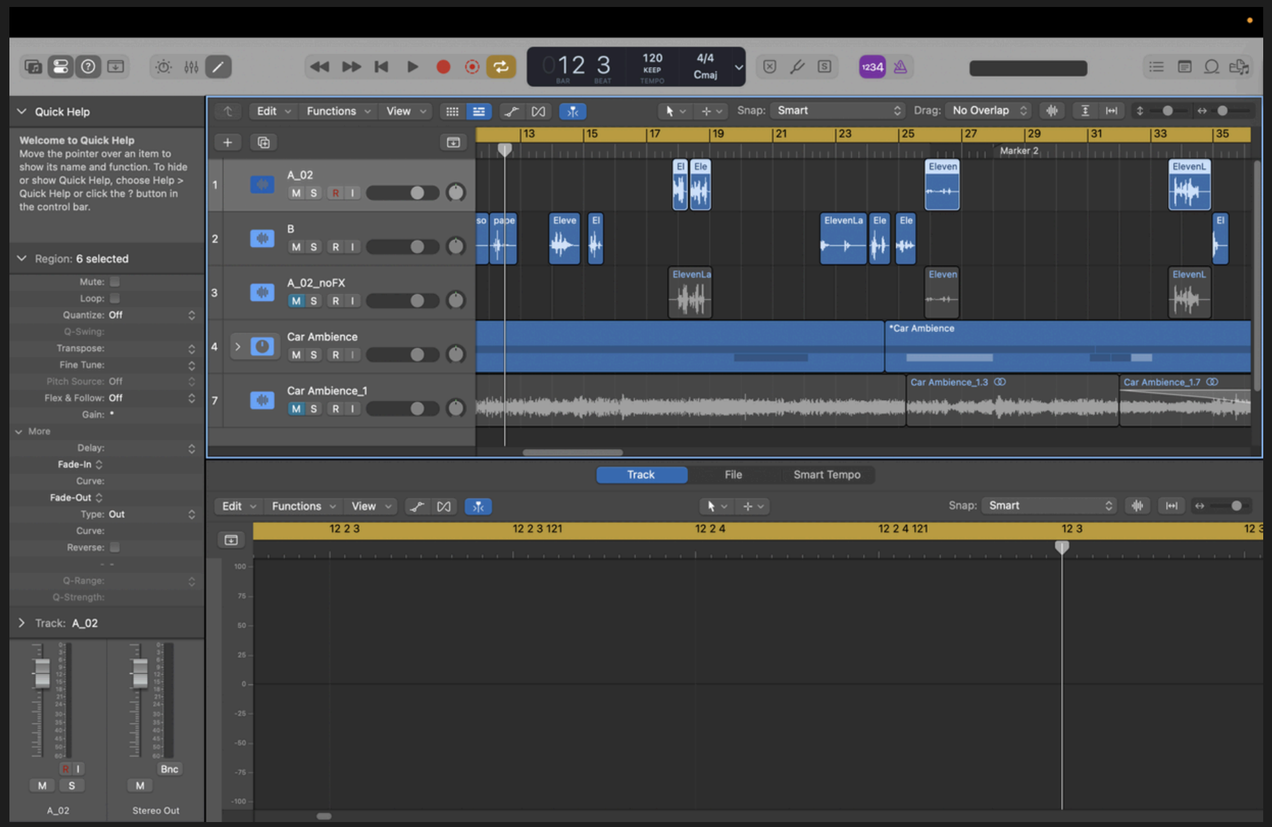
sketch_nov14a.ino

```
14
15  void loop() {
16    // Read the sensor
17    Signal = analogRead(PulseSensorPurplePin);
18
19    // Check if signal crosses the threshold upward (beat detected)
20    if (Signal > Threshold && !PulseDetected) {
21      PulseDetected = true;  // mark that we're in a beat
22
23      unsigned long currentTime = millis();
24      unsigned long delta = currentTime - lastBeatTime;
25
26      if (lastBeatTime > 0) {  // skip first beat (no interval yet)
27        BPM = 60000.0 / delta;  // 60000 ms per minute
28        Serial.print("BPM: ");
29        Serial.println(BPM);
30      }
31
32      lastBeatTime = currentTime;
33      digitalWrite(LED, HIGH);  // flash LED on beat
34    }
35
36    // When signal goes back below threshold, reset for next detection
37    if (Signal < Threshold && PulseDetected) {
38      PulseDetected = false;
39      digitalWrite(LED, LOW);
40    }
41
42    // Small non-blocking pause (optional for stability)
43    // Just ensures serial output isn't too fast
44    static unsigned long lastPrint = 0;
45    if (millis() - lastPrint > 20) {
```

Pulse Sensor Code

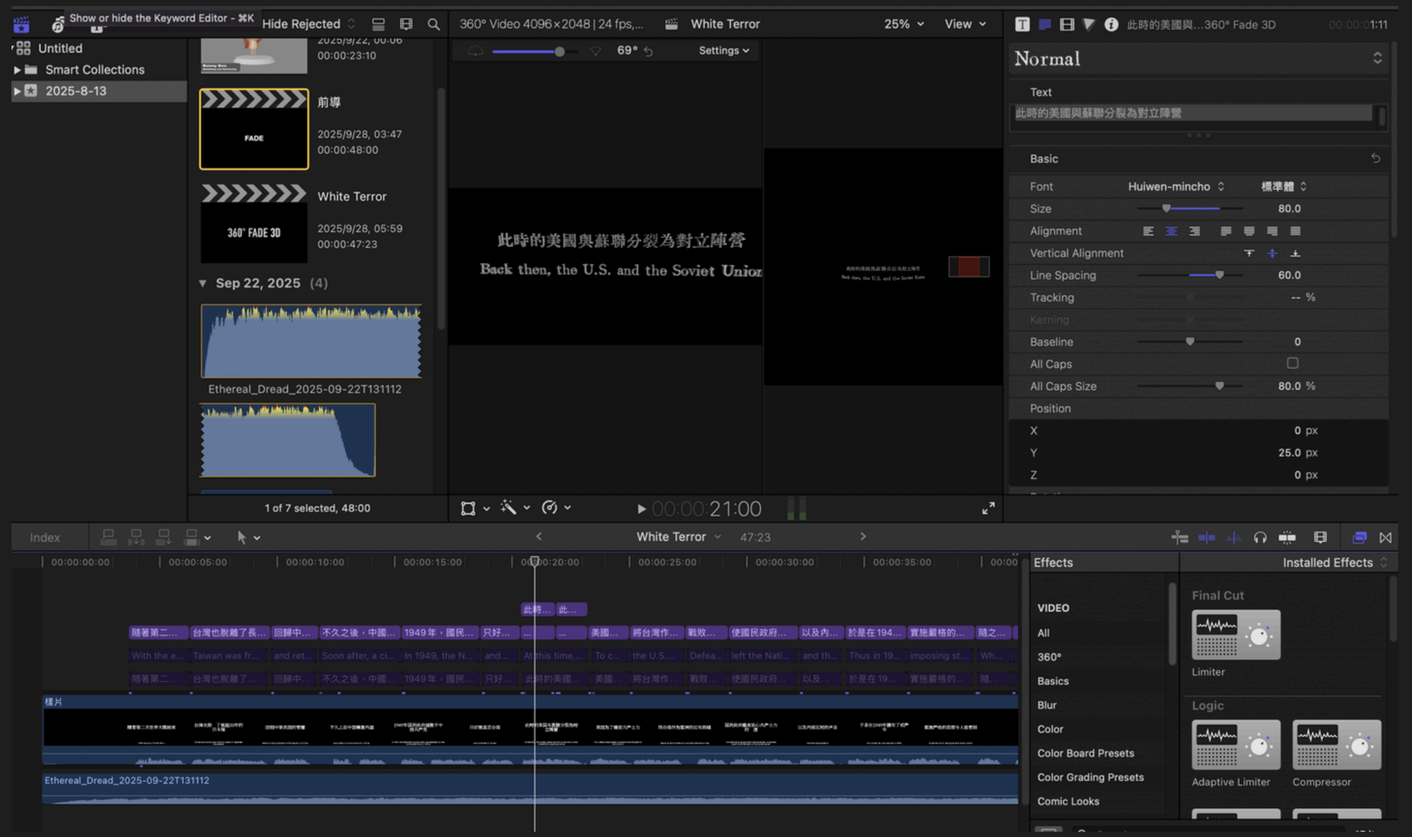
# Sound Design and Mix

## Logic Pro



# Final Cut Pro

## 360° video



# Arduino

# Title

# BG History

# Kidnapped Animation

# Car Scene