

Call / Response: script

About 4:40. Learn the flow, not every word. Look up at every full stop.

1 • Cover 0:00

Hi, I'm Nathan. My pitch is called **Call / Response**. In about two minutes, you're going to **hear a coding exam**.

2 • What's an algorave? 0:10

First, some context. **Who here has heard of an algorave?** (pause)

It's an electronic music event, but nobody plays instruments. The musicians **write code live**, and the code makes the music.

[point at the photo] Their screen is projected on the wall. That pink wall behind the performer? **That's all code**. So the crowd sees every decision as it's typed. The scene has one unspoken rule: **show us your screens**.

Now imagine one of the performers on that stage **is an AI**.

3 • Me vs an AI 0:35

Here's what that sounds like. First, the AI's turn. **[click top speaker, 5 sec, stop]**

That's the AI: four even kicks, a snare and hi-hats. The **most obvious dance beat** there is.

Now my turn. **[click bottom speaker, 5 sec, stop]**

I changed **one thing**. The kick now plays three hits spread over eight steps. Same beat, but **now it grooves**.

The AI makes the call. I make the response. Like a singer shouting "say ho!" and the crowd answering. And **that was a coding exam**. You just watched me make a choice.

4 • The problem 1:05

Why does that matter? Because right now, **AI can do our coding assignments for us**. In one study, **1 in 3** beginner prompts were just the assignment, pasted in. AI also makes everyone's work look more alike. And struggling students think they did better than they actually did.

So we can paste, but we **can't actually code with AI**. The real problem is that **the thinking is invisible**.

5 • Why algoraves 1:30

Algoraves already fix that, in three ways. **Visible**: the code's on the wall, so everyone sees who made each choice, the AI or the student. **Live**: it happens in real time; you can't paste a performance. **Local**: USyd's own Design Lab hosted one in Redfern in 2013.

So I **put an AI on that stage**.

6 • Meet The Default 1:45

Meet **The Default**: an AI bandmate that always plays it safe. Its instructions are on screen: be the most average live coder alive.

[point left] Every 15 seconds, it reads my code and adds **one line**, the most obvious move, shown in grey. I answer in white: I **twist it, break it, or refuse it**.

[point right] After the set, a **second AI, the critic**, asks me why I made each change. So the AI is in the open. You always see **who chose what**.

7 • How it fits a course 2:15

So how does this fit a course? The brief invited us to disagree, so I did. It's still a 6-credit-point first-year Design unit, but **co-taught with the Conservatorium**, and built around a gig.

There are three stages. **Respond**: you answer the AI. **Direct**: you tell it what to play. **Conduct**: you lead a whole band of AIs. By the end, you can **read, steer, reject and explain** code an AI wrote.

And **the exam is the gig**. USyd's AI policy already counts live performance as secure assessment.

8 • What's already out there 2:50

To be honest, this space already exists. Param Strudels and StrudelLM: the AI makes the music for you. Suno: the AI is the artist. CS50 Duck: it's a chatbot tutor.

None of them teach you to lead the AI. They're producers. Mine is a **sparring partner**.

9 • How I'd build it 3:15

So how would I build it? It's a **web page, like the ones we already make** in VS Code: HTML, CSS and JavaScript. Strudel plays the music, Hydra does the visuals, Claude is The Default, and a log feeds the critic.

The **hardest part** is the AI writing a line that breaks the music, so every line gets tested first, with a safe backup. For the first prototype, I'd use **Wizard-of-Oz**: a

person secretly plays the AI, so we can test the teaching first.

10 · Who it's for 3:40

So who is it for? [\[read the quote on screen\]](#) That's the most common first barrier for beginners, from Ko and colleagues, 2004. With The Default, you **never start from a blank page**; there's always something to respond to.

It's for students who freeze, students who think "p5 is useless", music students, and tutors who need a test **AI can't sit**.

11 · Who could this hurt? 4:00

And who could it hurt? **Musicians, first**. Suno and Udio have been sued since 2024 for training on their work. So in this course, **the AI is never the artist**, and every sound is Creative Commons.

Nervous performers can do small groups, or a recorded set. Students' own code only goes to uni-approved AI. And for non-musicians: talent isn't marked. **Choices are**.

12 · Close 4:30

So: **AI plays the average. You lead the band**. [\(pause, look up\)](#) Thank you. Any questions?