用程式玩音樂 Sonic Pi

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Making Computer Science Audible

Examples



Sonic Pi

The Live Coding Music Synth for Everyone.

Welcome to the future of music.

Simple enough for computing and music lessons.

Powerful enough for professional musicians.

Free to download with a friendly tutorial.

http://sonic-pi.net

Learn to code creatively by composing or performing music in an incredible range of styles from classical & jazz to EDM.

Brought to you by Sam Aaron and the Sonic Pi Core Team Sonic Pi is available free for:

Windows macOS Raspberry Pi Linux

Created at the University of Cambridge Computer Laboratory
with kind support from pi-top and generous Patreon supporters.

Sonic Pi is an Open Source Project released under the MIT Licence.

Introducing Sonic Pi

Tutorial WALKTHROUGH





Join Sonic Pi creator and live performer Sam Aaron as he introduces us to the joys of live-coding music on the Raspberry Pl...

he lights sliced through the mist as the rhythms moved the crowd, the atmosphere ripe with a heady mix of synths. However, something wasn't quite right. Projected in bright olours above the performer was futuristic test, moving, dancing, flashing. This wasn't fancy streak; it was merely a projection of Sonic Pi running on a Baspberry Pi. The musician wasn't spinning discs she was writing, editing, and evaluating code. Live. This is live coding.

It may sound like a fac-fetched scene from a futuristic music festival, but is actually a description of a pupil performing at their primary school assembly. Coding music like this is a growing trend and is often described as live coding. However, this approach to manipulating code ian't Just useful for performance; it's also a fabutous way of engaging a new generation of coders in the classroom.

Engaging a new generation of coders

Across the educational landscape, it's becoming clear that teaching programming is an increasingly important aspect of our curriculum. What is second engaging students in easier to effectively mach the code fundamentals of programming. Of owner, there's very limited educational value to ask expert programment what excited them to ask expert programment what excited them of ask expert programment what excited them of the programment when excited them of the programment when excited the programment is the programment of the programm non-portant aspect of our our resistent. What is not obvious, however, is exactly how we go about enginging students in order to effectively teach the core fundamentals of programming. perporties ranging from setting algorithms to binary acidstimetic. Whilst these may be desply interesting and engaging topics for computer scientists, in's

not clear that they are effective topics for exciting a broad and diverse range of students in introduc computing. This is especially significant considering that most students will not emback in a career in

Sonic Pi talara a different approach. It turns code into a powerful new kind of musical instrument with a focus on fast feedback and incustor learning. It enables students to code the kinds of music they're typically used to lintening to. If this claim sounds a limbs ambitious, take a look at this quotation from the Ruding Stone magazine (magpLectAcPect) covering a recent Sonic Pt performance at Monghest USA. "[The set] - which sounded like Destric California

"[The set] - which sounded like Destric Cable as Kraffweck, a little bit of Aphac Twis skitter and sume Eighties electrin - was constructed through spring and defecting lines of code. The shadowy Disest, knob- tweeking noise and logiants emblem of many Monglest perdamener was emplaying demystified and turned into simple numbers and laters that you could see in action. Dubbed "the live coding sprint so contraction," at male seemed less like a performance and everyone", it truly seemed less life a performance or more like an invitation to rode your own absonute.

- Sonic Pi helps you engage students in Computing through music.
- Read how in the article 'Live Coding Education'

Free Sonic Pi Book

