

# **Workshop 03**

## **What is Live Coding?**

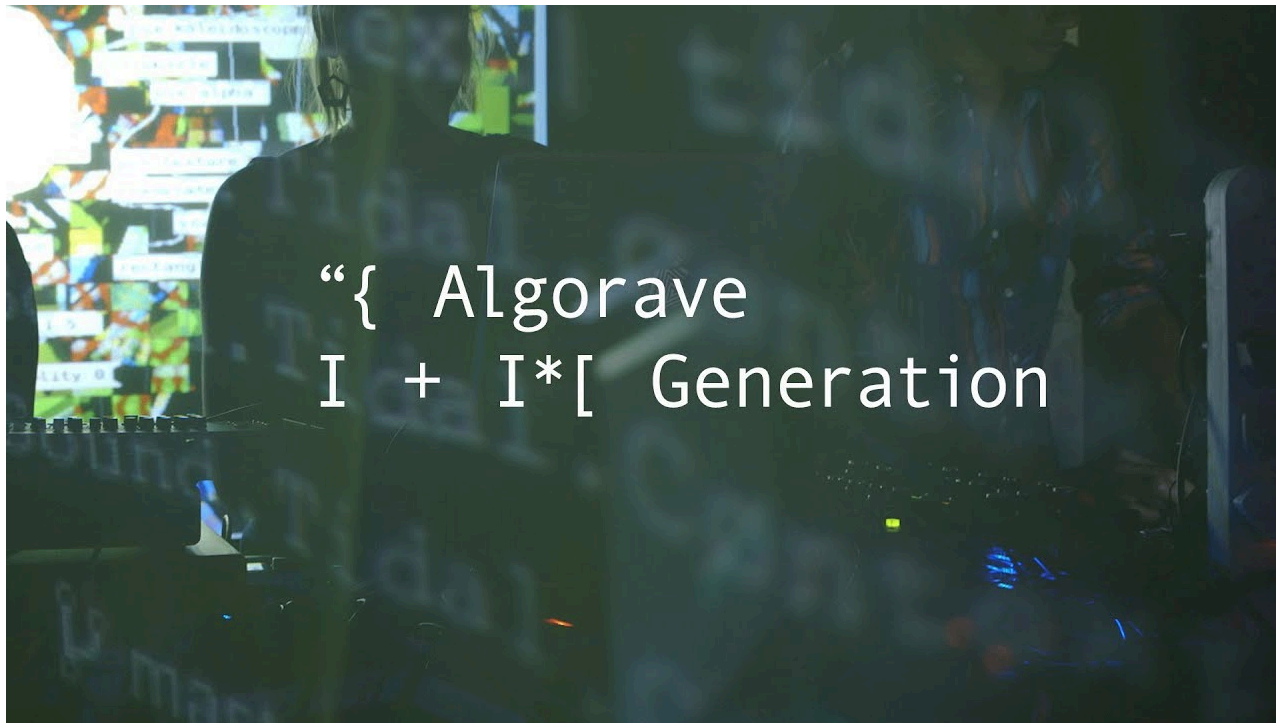
Atsushi Tadokoro

# Introduction

# Introduction

Algorave Generation | Resident Advisor

<https://youtu.be/S2EZqikClfY>



# Live coding

# Live coding

## Various Terms

- Live programming
- Interactive programming
- On-the-fly programming
- Performative programming
- ascii music...

## Live coding

This time, we will focus on the “live” aspect and use the term **Live coding**

First, let's consider the meaning of “live”

# **Live - Live Editing of Code**

# Live - Live Editing of Code

Interpreter-based programming languages

- LISP (1962)
- LOGO (1965) - Turtle graphics



## Turtle graphics

```
THE TERRAPIN LOGO LANGUAGE  
WRITTEN BY L. KLOTZ, P. SOBALVARRO  
AND S. HAIN UNDER THE SUPERVISION  
OF H. ABELSON.  
COPYRIGHT (C) 1981 MIT  
VERSION 1.0  
WELCOME TO LOGO  
?≡
```

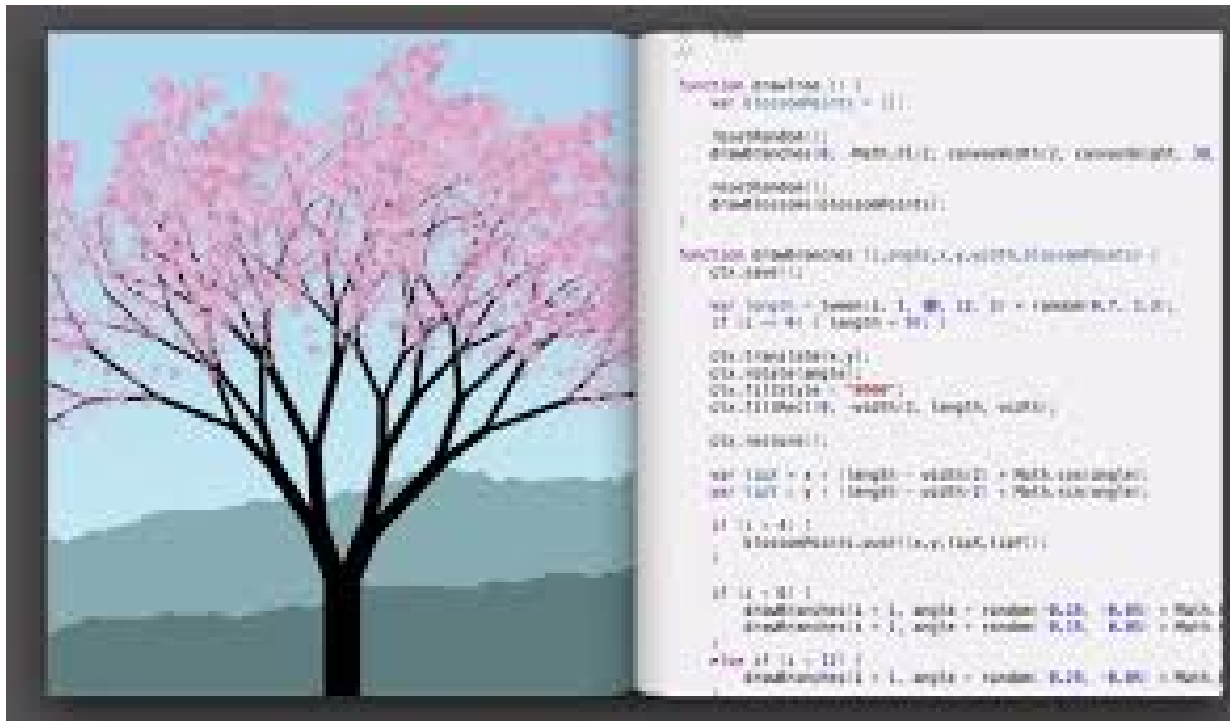


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## Live - Live Editing of Code

# New trends in programming development environments

## Bret Victor - Inventing on Principle



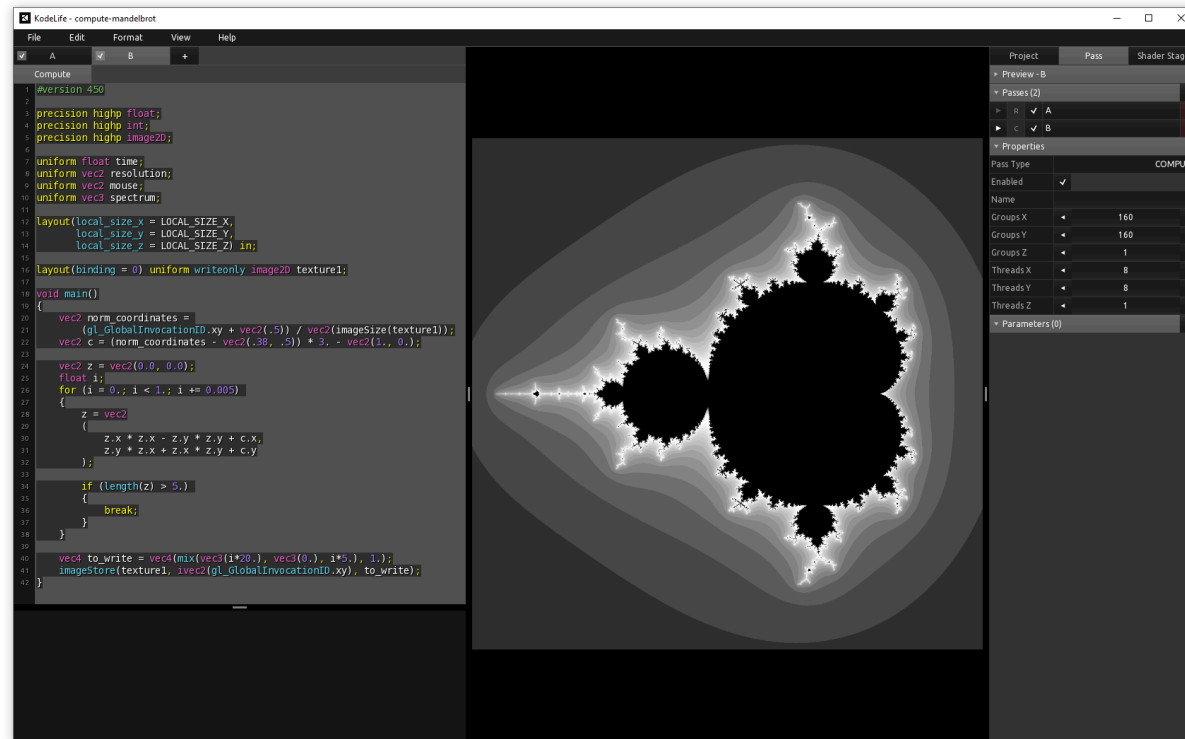
# Live - Live Editing of Code

## p5.js editor



# Live - Live Editing of Code

## Kodelife



# **Live - Coding as a Live Performance**

## Live - Coding as a Live Performance

- Another meaning of “live”
  - Coding as a live performance
- Various attempts have been made in live music performance
- “Live electronic music”

# Live - Coding as a Live Performance

1990's Laptronica (Live electronic music)

Farmers Manual



# Live - Coding as a Live Performance

This trend continues today

Example: Mark Fell - Mark FELL\_Concert PRESENCES électronique 2014

<https://youtu.be/s15wdk2xQik>





# Live - Coding as a Live Performance

However, there was a problem...

What are they actually doing? Are they really performing?

**Compare two videos**

Kraftwerk - Pocket Calculator

<https://youtu.be/UZiTr4hwHXI?si=ZkCJfKEeqSVAl-jn>

[https://www.youtube.com/watch?v=K\\_pxAVULNEw](https://www.youtube.com/watch?v=K_pxAVULNEw)

# Live - Coding as a Live Performance

**“Show Us Your Screens”**

A key concept in live coding

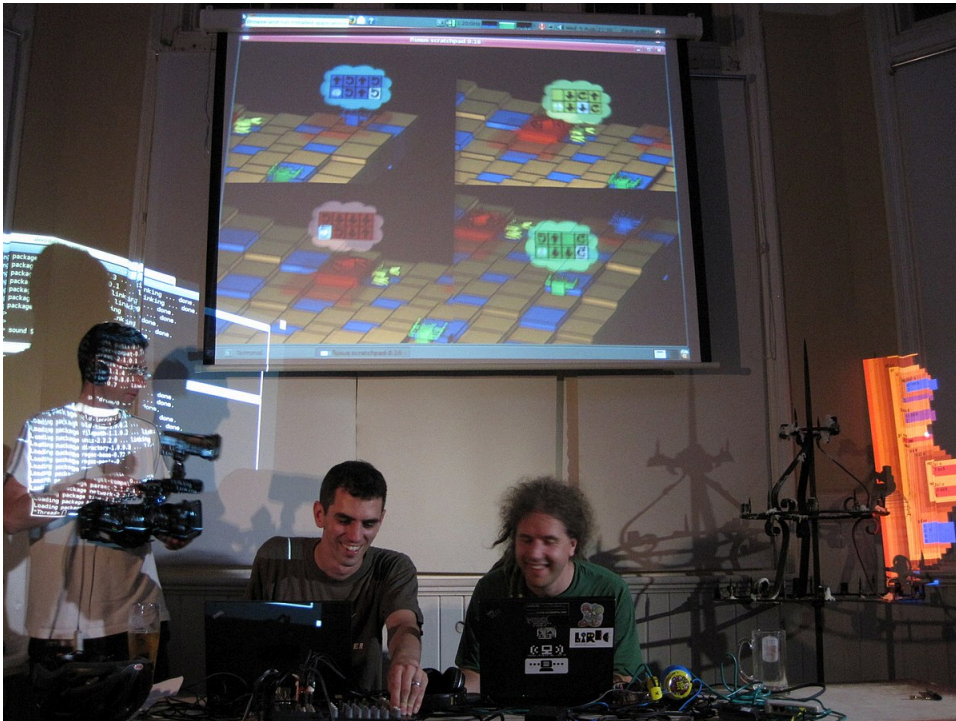
<https://vimeo.com/20241649?share=copy>

# Live - Coding as a Live Performance

Slub (2000) : Adrian Ward, Alex McLean, Dave Griffith

Started experimenting with projecting the programming process onto a screen during performances

<http://slub.org/>



## **Live - Coding as a Live Performance**

**SLUB Live Coding performance Aarhus Kunsthall**

Alex McLean, Dave Griffiths

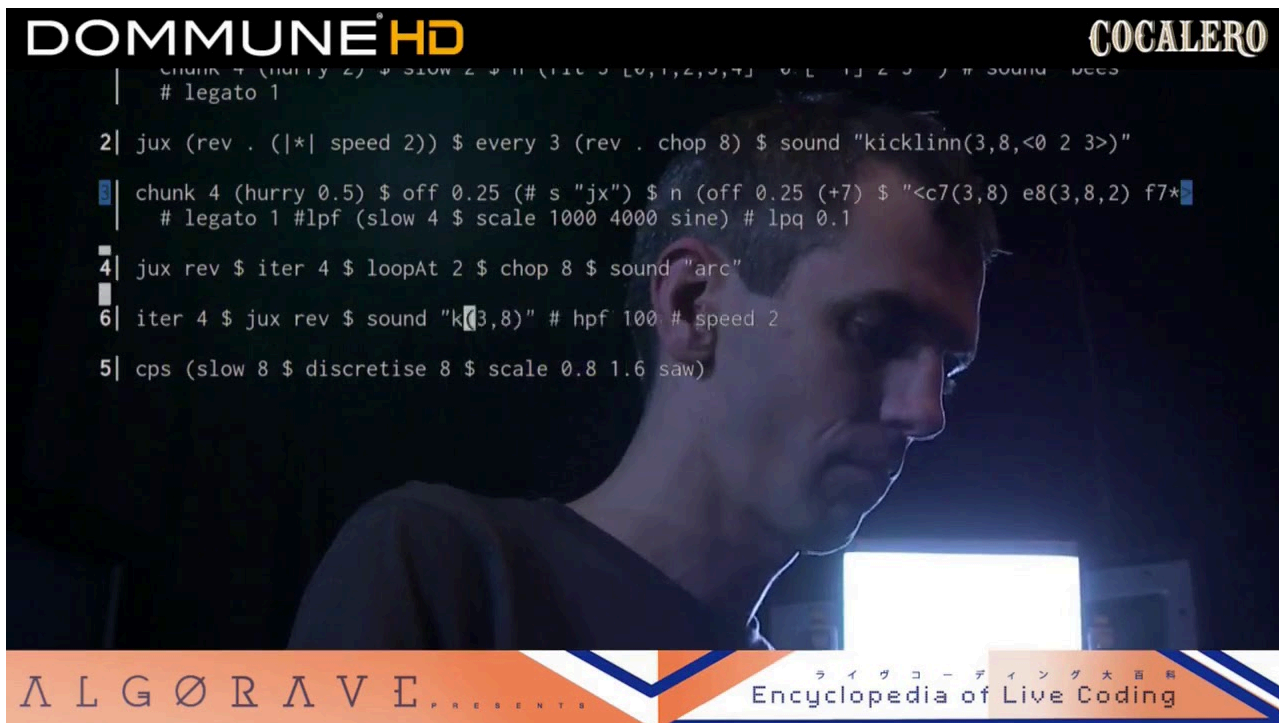
<https://youtu.be/Z-8DX7g2zEc>

# Live - Coding as a Live Performance

Alex McLean (Yaxu) live on DOMMUNE

Alex McLean's performance at DOMMUNE during his 2018 visit to Japan

<https://www.youtube.com/watch?v=dIpzU71LAQQ>



# Live - Coding as a Live Performance

NIME 2016 'Barely a Piano' by Andrew Sorensen

<https://vimeo.com/176422744>

# Live - Coding as a Live Performance

Renick Bell, live @ Tama Art University

Nov. 27 2013, Tokyo Japan

<https://youtu.be/BvXUK6FXPu8>

# The Live Coding Community

- TOPLAP (2004) : The live coding community
- <https://toplap.org/>





# Algorave

- Algorave = algorithm + rave
- Parties centered around performances using live coding
- <https://algorave.com/>

# TOPLAP Manifesto

<http://toplap.org/wiki/ManifestoDraft>

- Give us access to the performer's mind, to the whole human instrument.
- Obscurantism is dangerous. **Show us your screens.**
- Programs are instruments that can change themselves
- The program is to be transcended - Artificial language is the way.
- Code should be seen as well as heard, underlying algorithms viewed as well as their visual outcome.
- Live coding is not about tools. Algorithms are thoughts. Chainsaws are tools. That's why algorithms are sometimes harder to notice than chainsaws.

25

**Now, let's actually experience live coding!**