XS images in JPEG XL

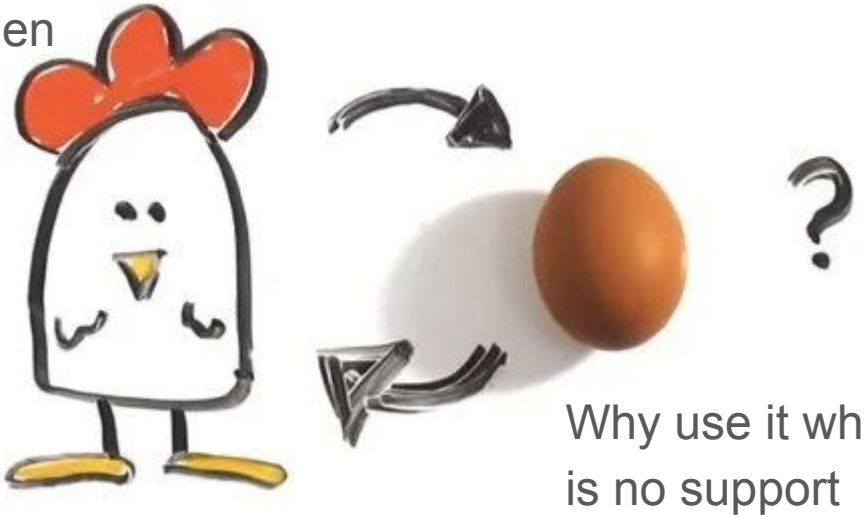
Ondřej Kinšt

JPEG XL (“JXL”)

Fancy image format that is supposed to replace JPEG *and* PNG

Standardised in 2021 but only recently starting to be supported and used

Why support it when no one uses it



Why use it when there is no support

Guess every pixel, store only the mistake

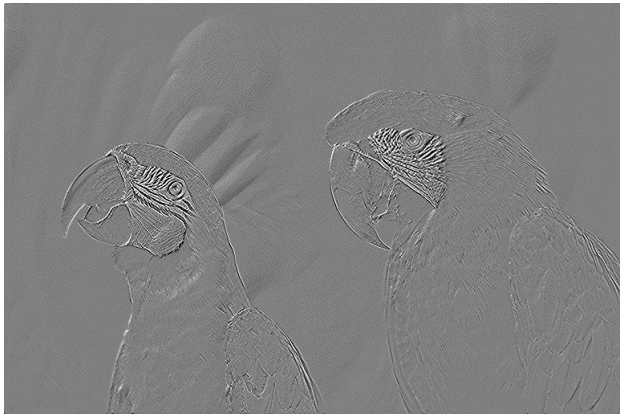
pixel = prediction + residual



Original

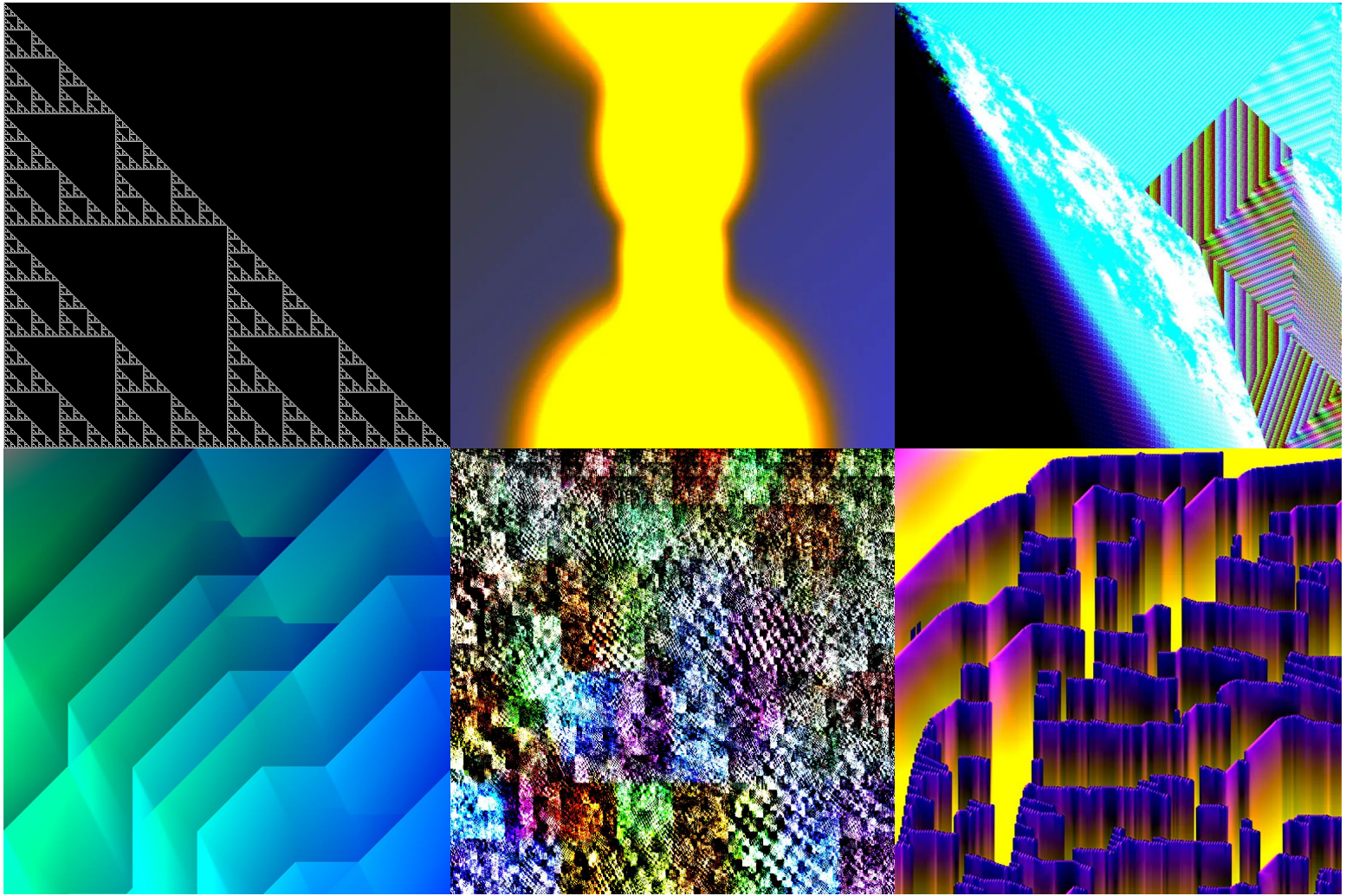


Prediction

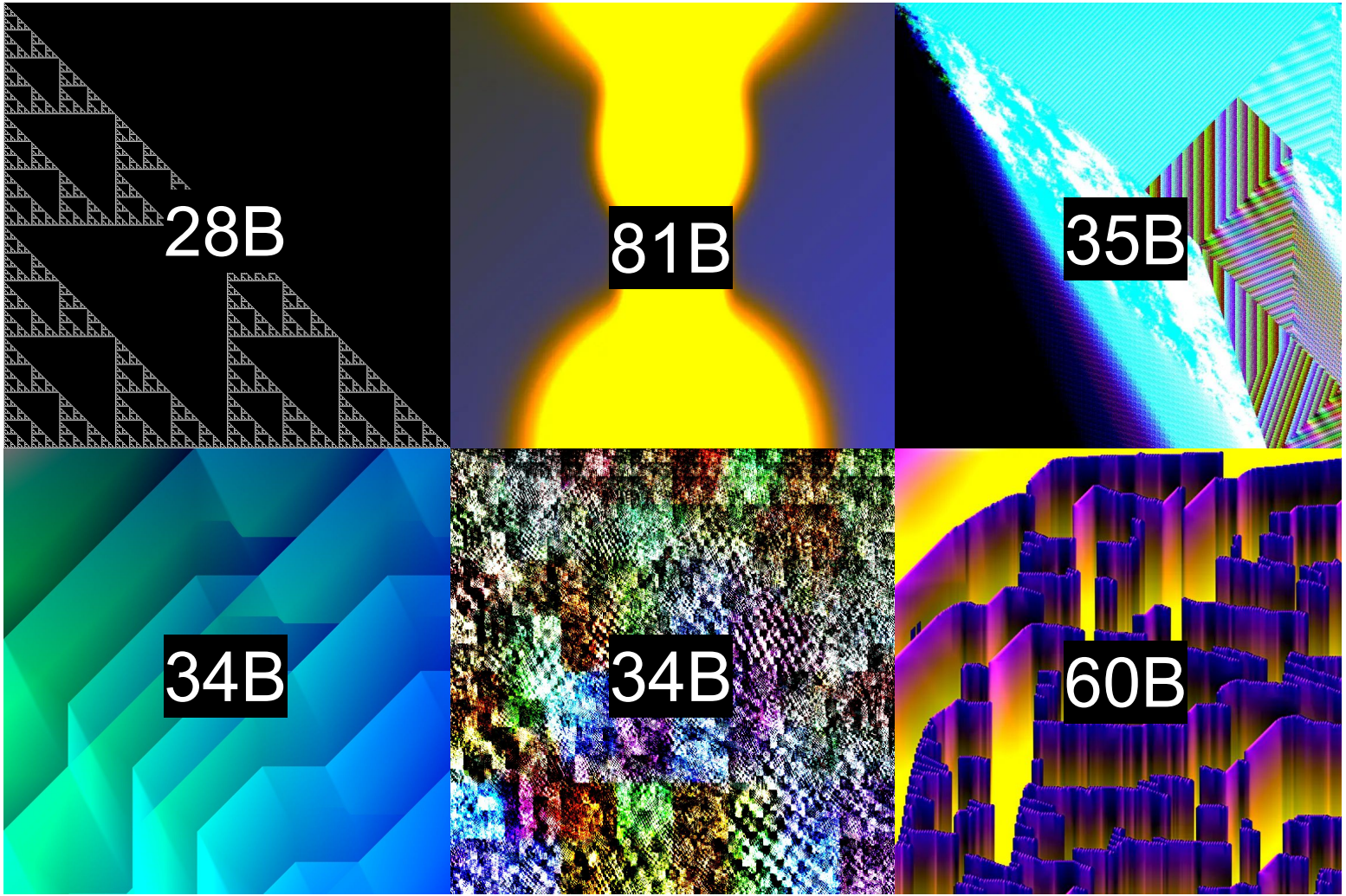


Residual

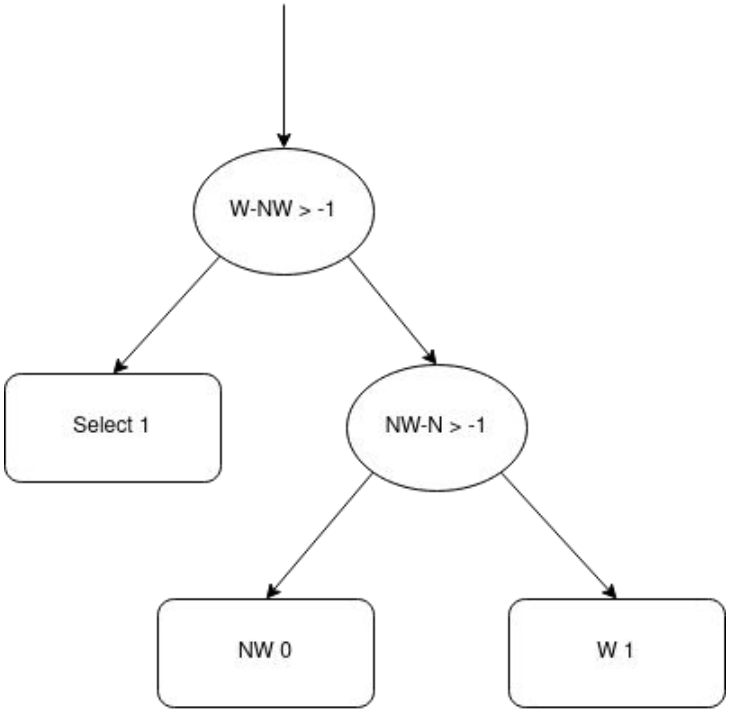
JXL Art



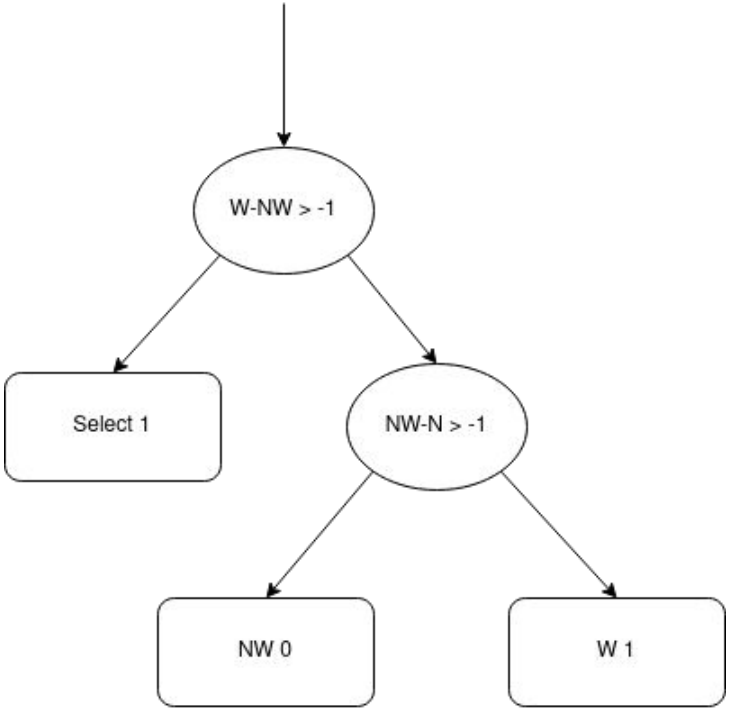
JXL Art



Decision trees

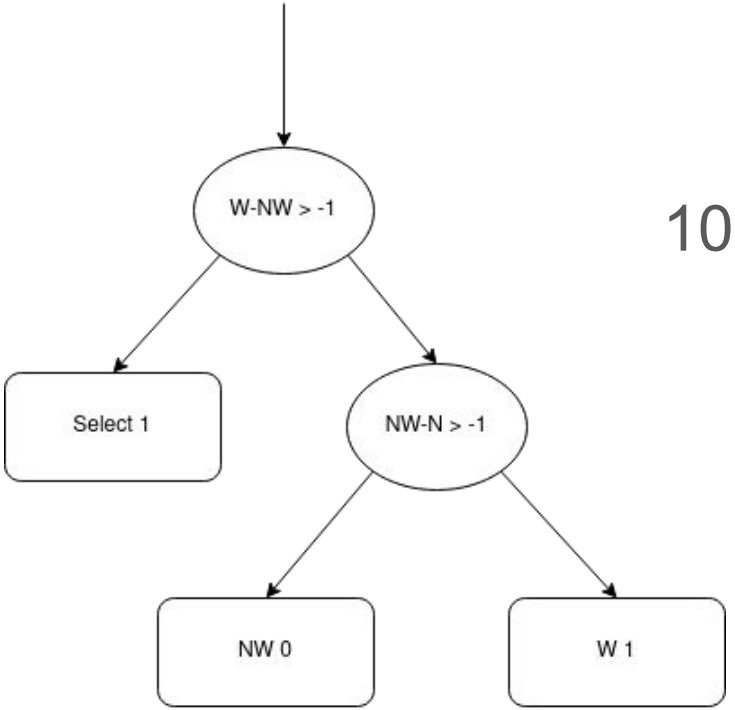


Decision trees



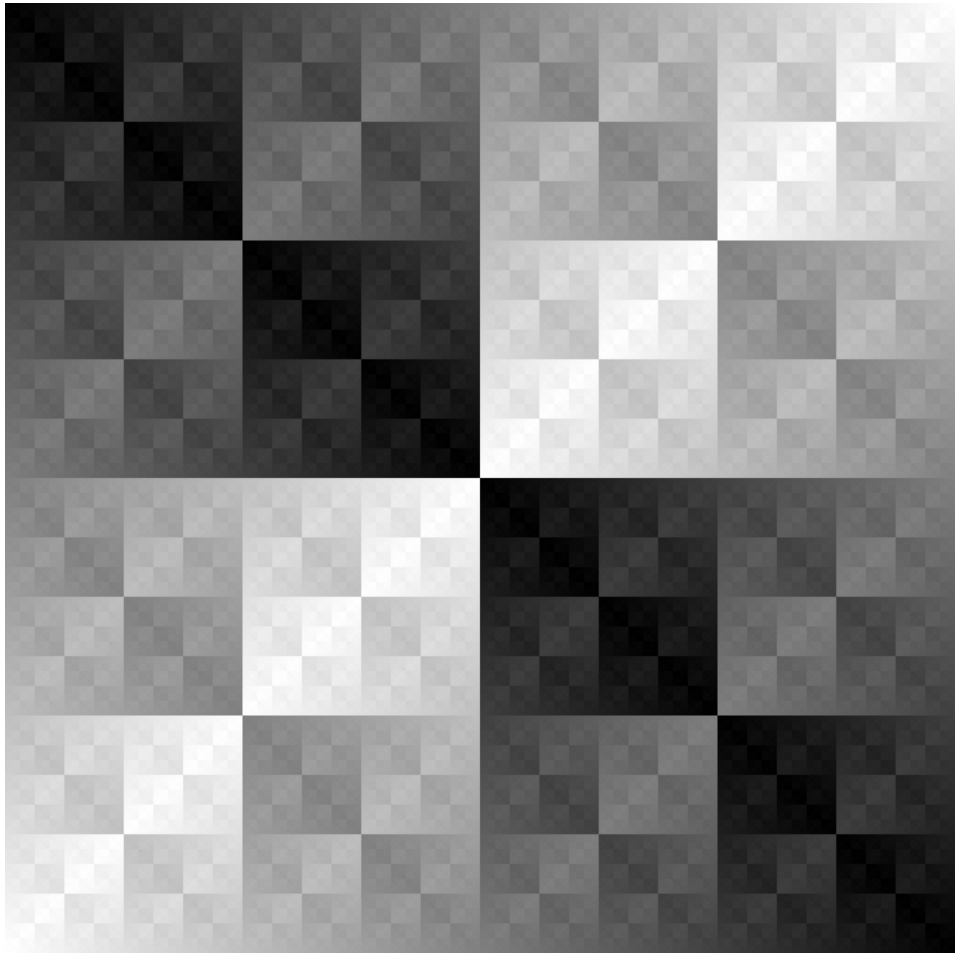

```
if W-NW > -1
  if NW-N > -1
    - W 1
    - NW 0
  - Select 1
```

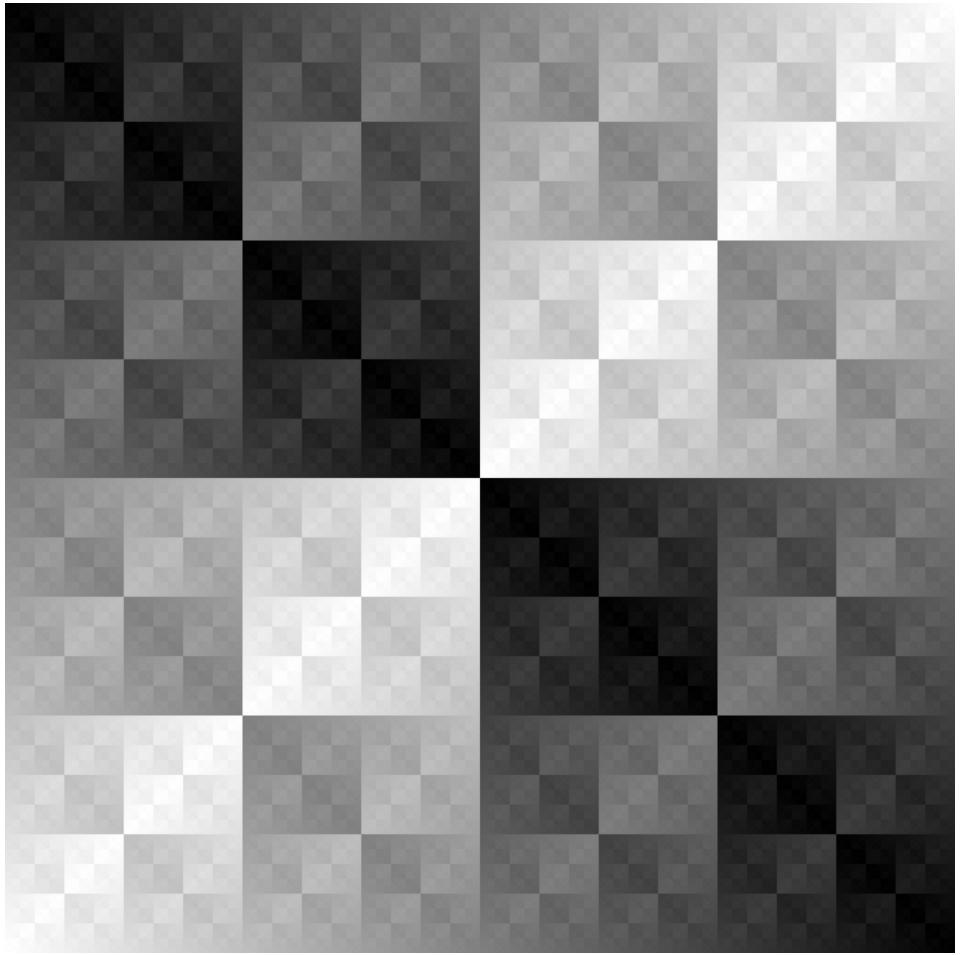
Decision trees



1024 x 1024 x 3

```
if W-NW > -1
  if NW-N > -1
    - W 1
    - NW 0
  - Select 1
```





25 B

Tools

https://jxl-art.surma.technology/

https://jxl-art.lucaversari.it/

https://www.januschka.com/jxl-art/

https://qon.github.io/jxl-art/

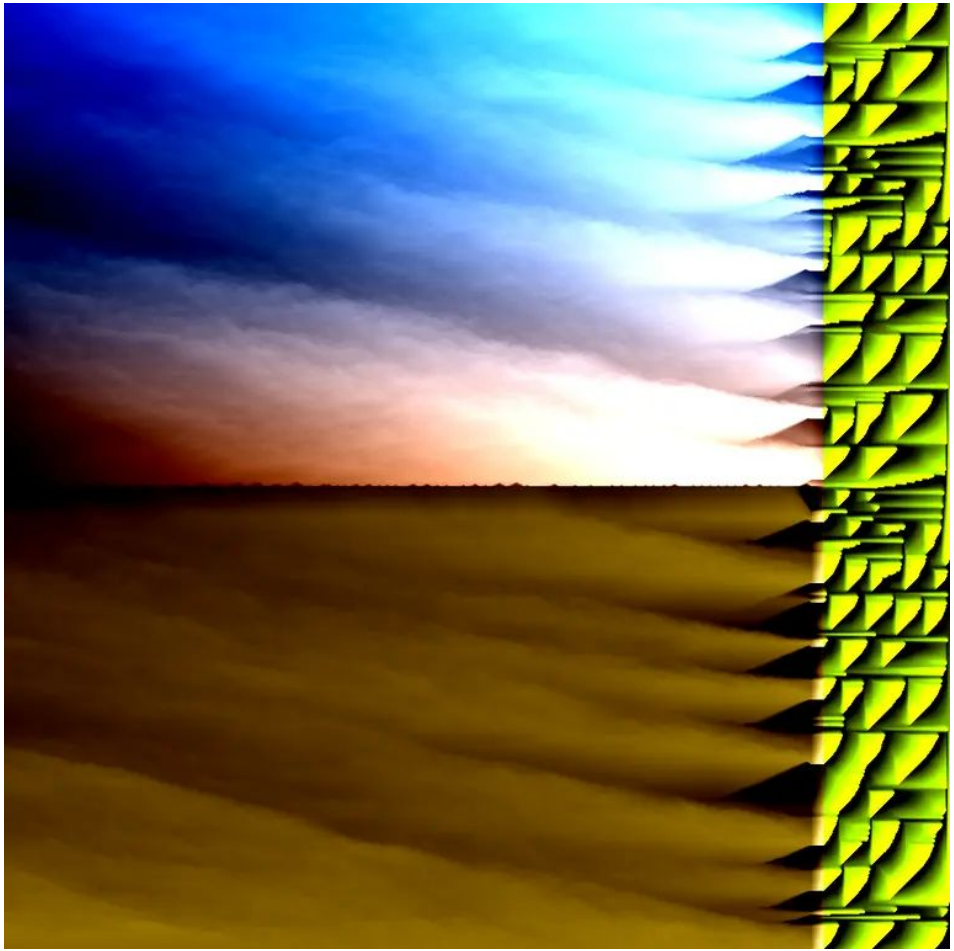
```
Width 800
Height 500
RCT 0

if y > 249
  if c > 0
    - Set 0
    - Set 255
  - Set 255
```

```
Width 800
Height 500
RCT 0

if y > 249
  if c > 0
    - Set 0
    - Set 255
  - Set 255
```

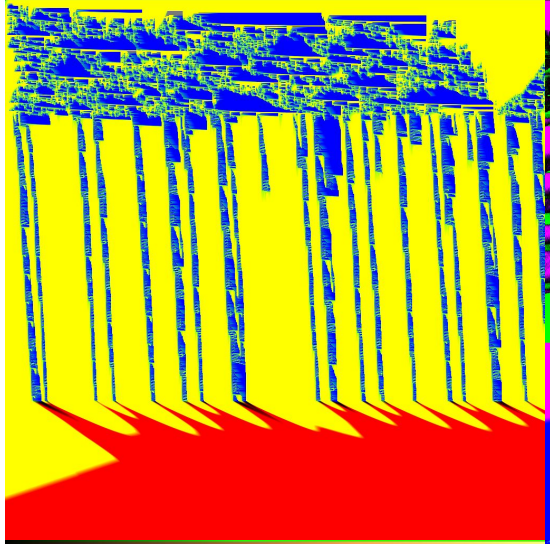
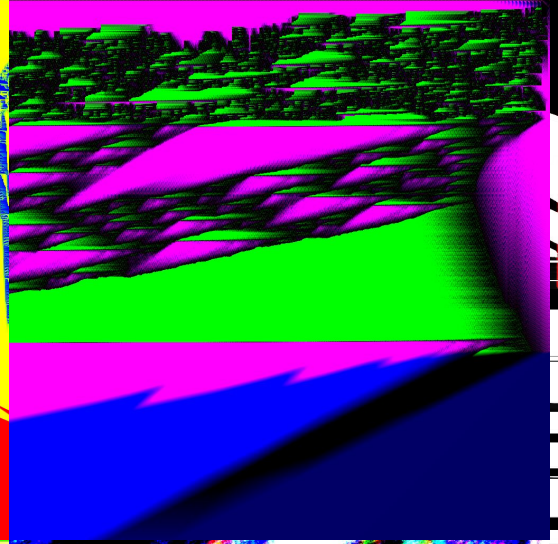
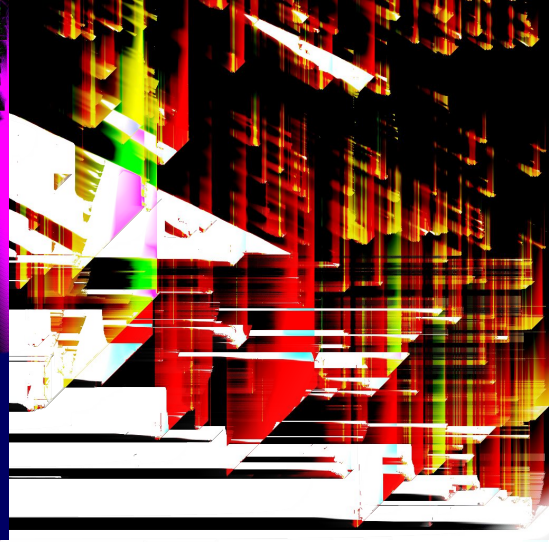
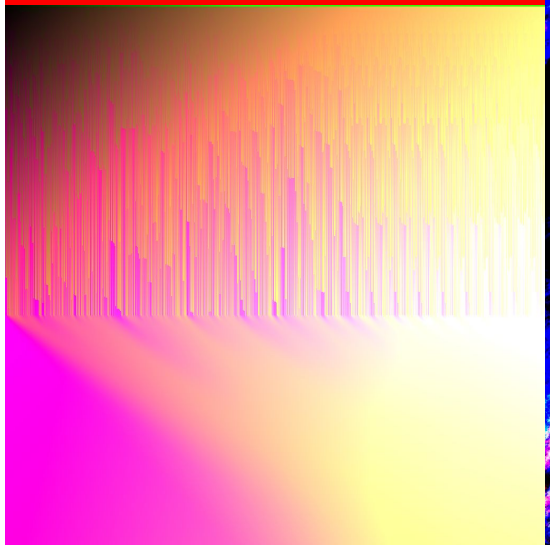
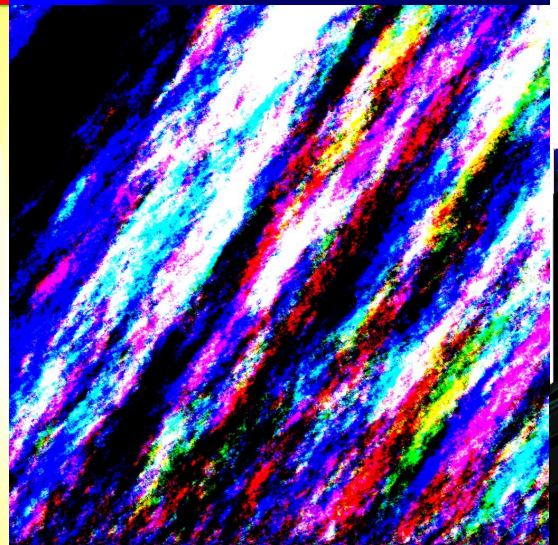
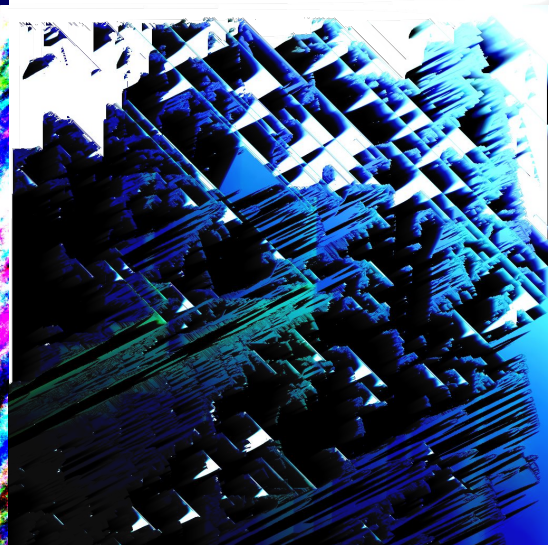




72 B

```
Orientation 7
RCT 6

if y > 150
  if c > 0
    - N 0
    if x > 500
      if WGH > 5
        - AvgN+NW + 2
        - AvgN+NE - 2
      if x > 470
        - AvgW+NW - 2
        if WGH > 0
          - AvgN+NW + 1
          - AvgN+NE - 1
  if y > 136
    if c > 0
      if c > 1
        if x > 500
          - Set -20
          - Set 40
        if x > 501
          - W - 1
          - Set 150
      if x > 500
        - N + 5
        - N - 15
    if W > -50
      - Weighted - 1
      - Set 320
if W > 73
  - Set 105
```

https://jxl-art.toaster.work/

