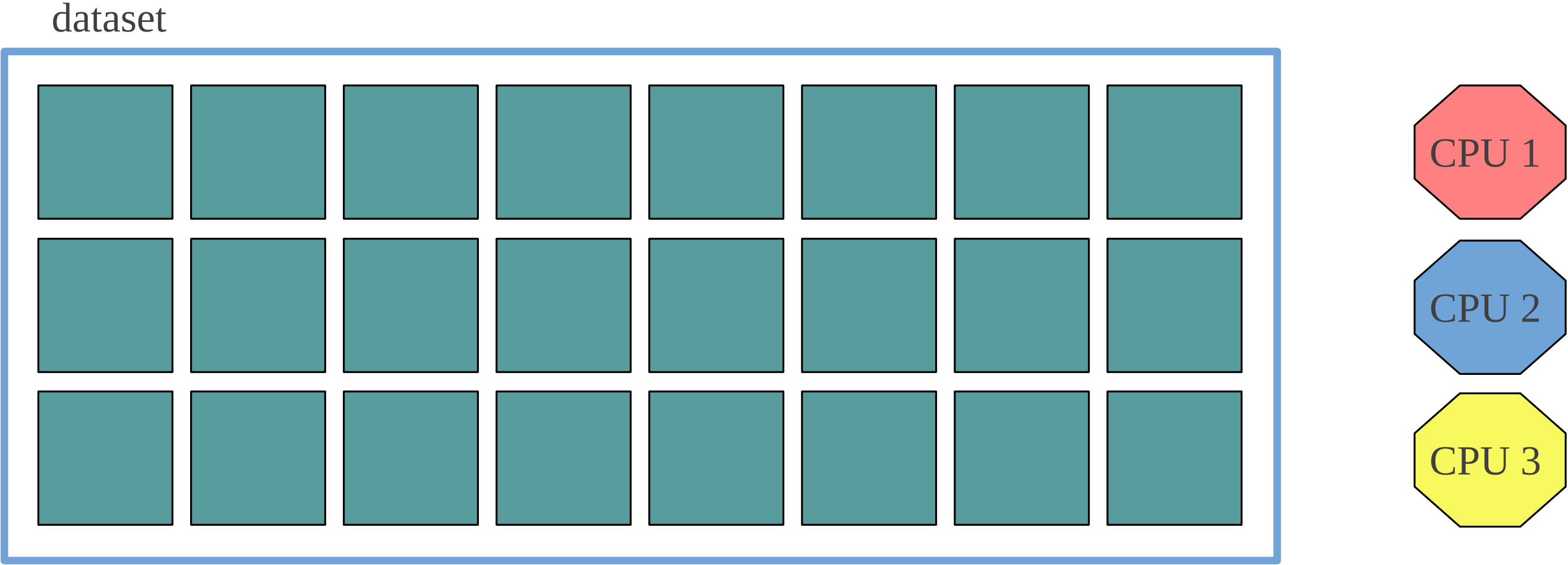


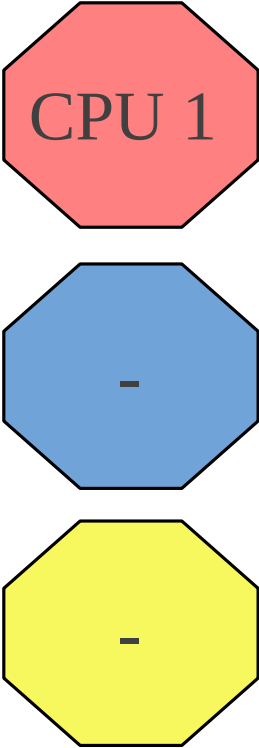
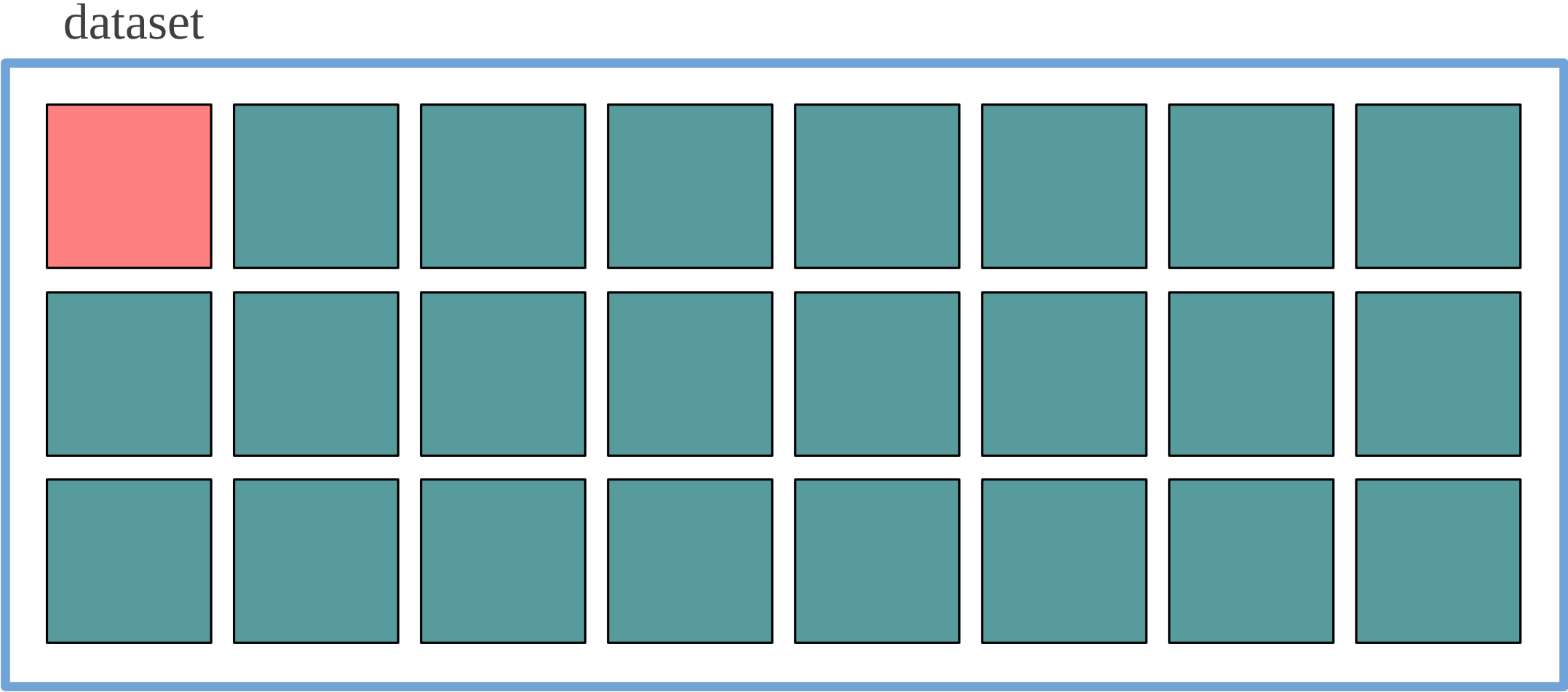


# ANALYSIS OF GLOBAL TEMPERATURE

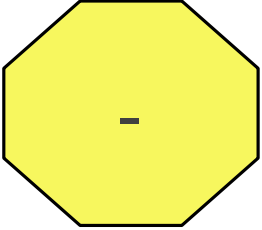
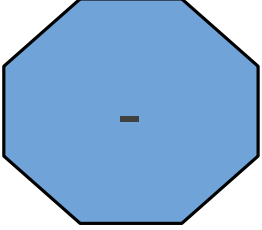
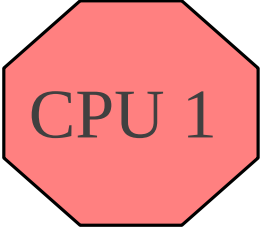
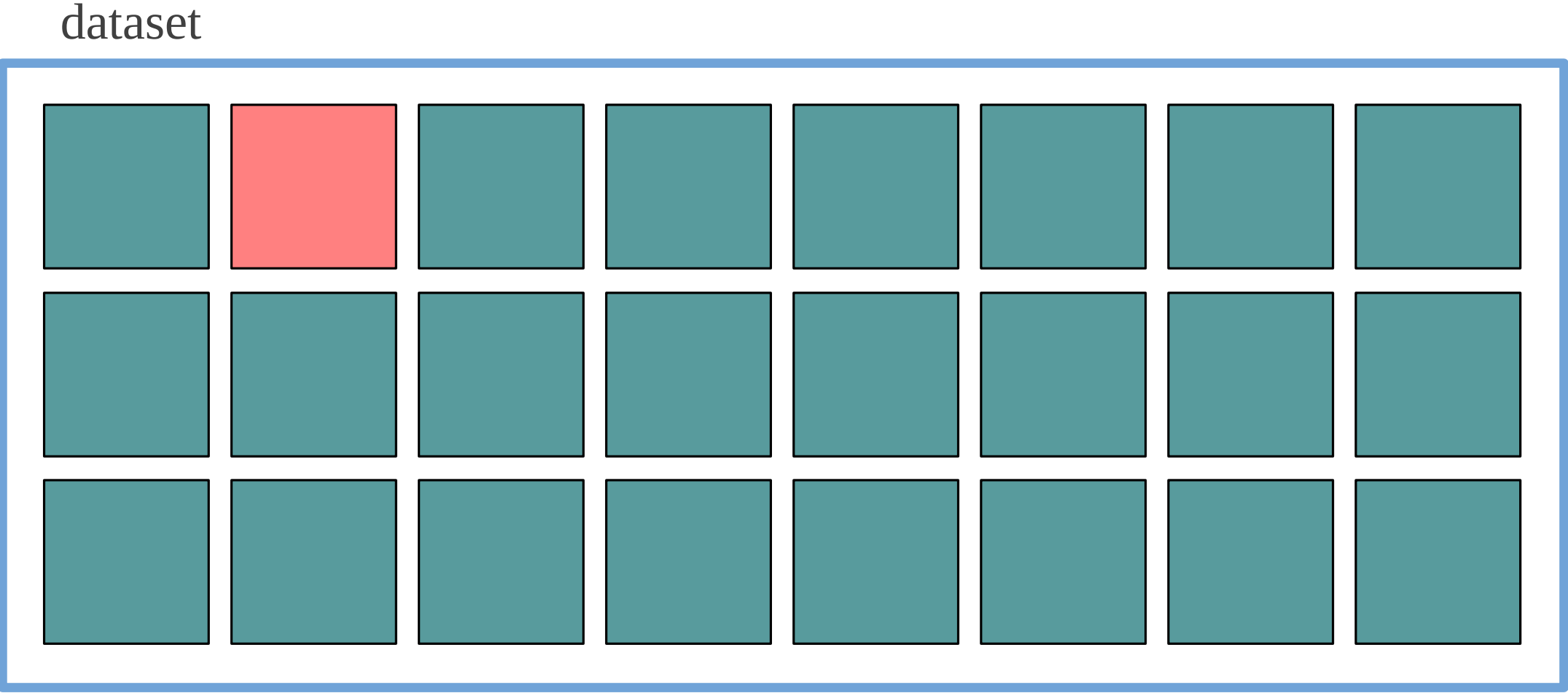
# Data processing



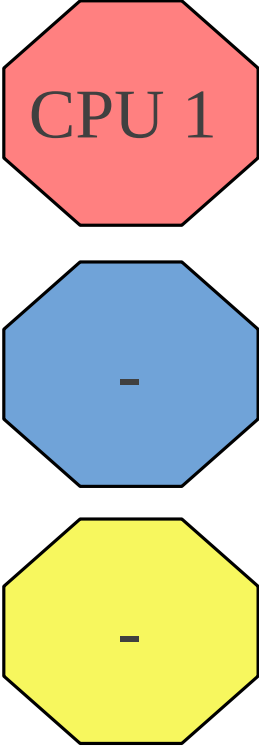
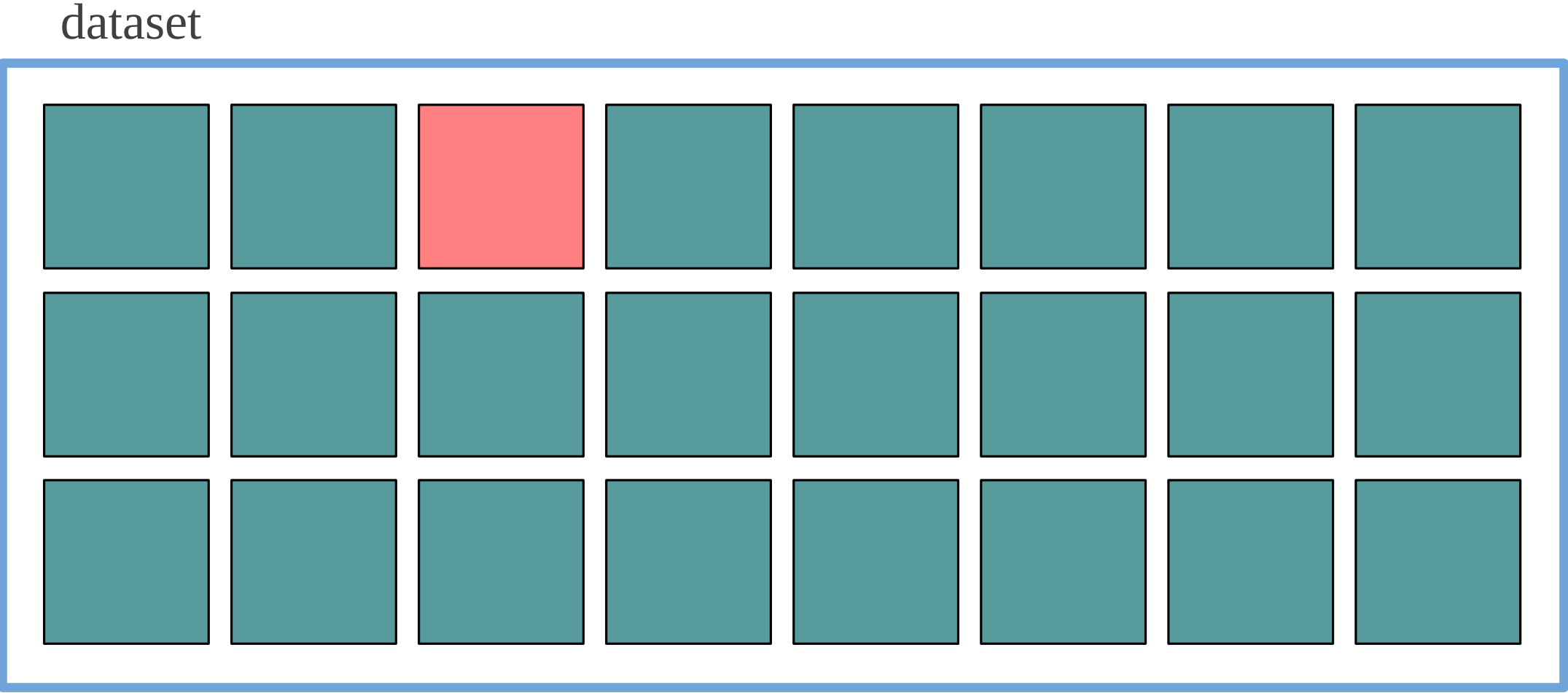
# Sequential iteration



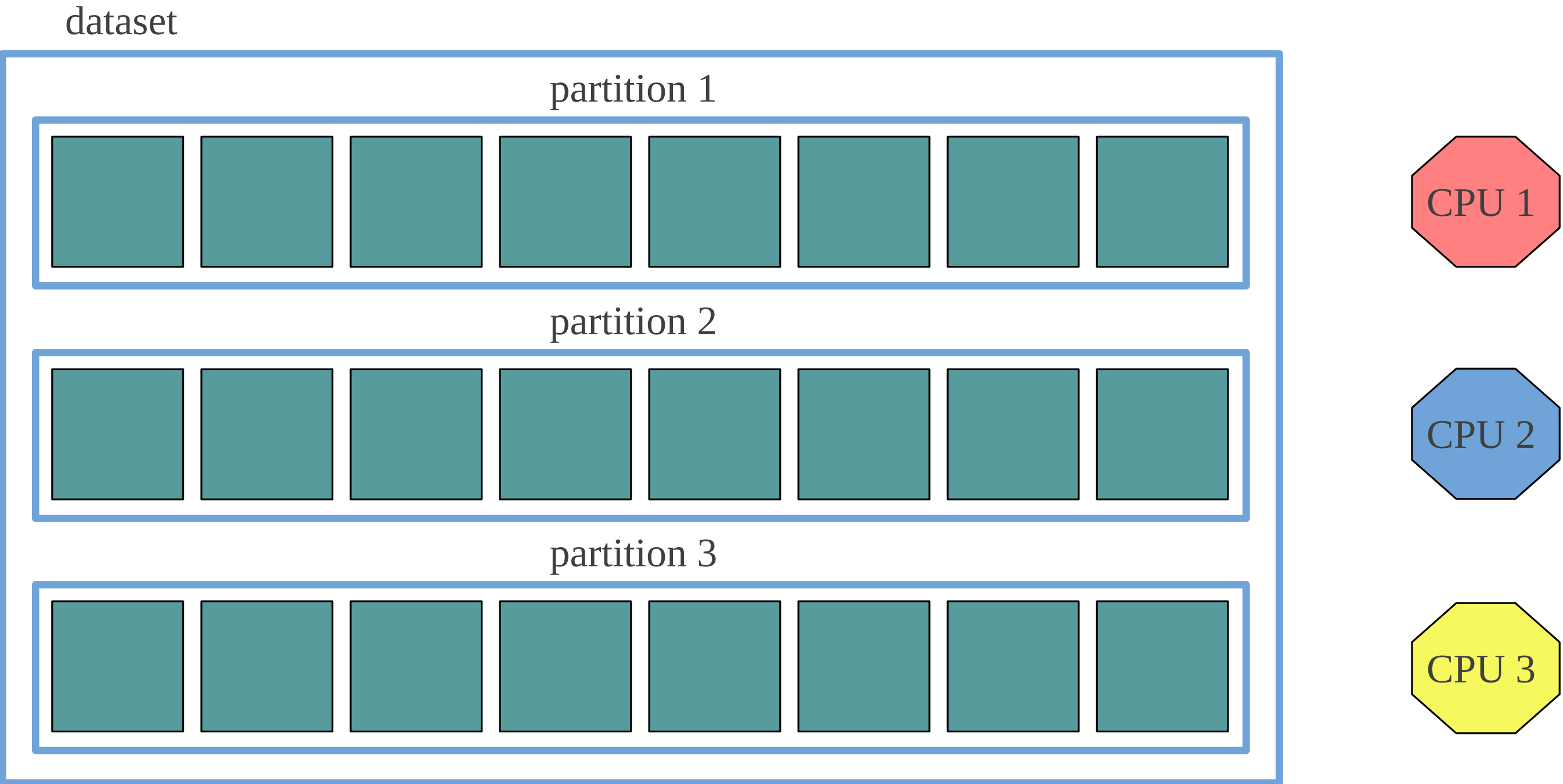
# Sequential iteration



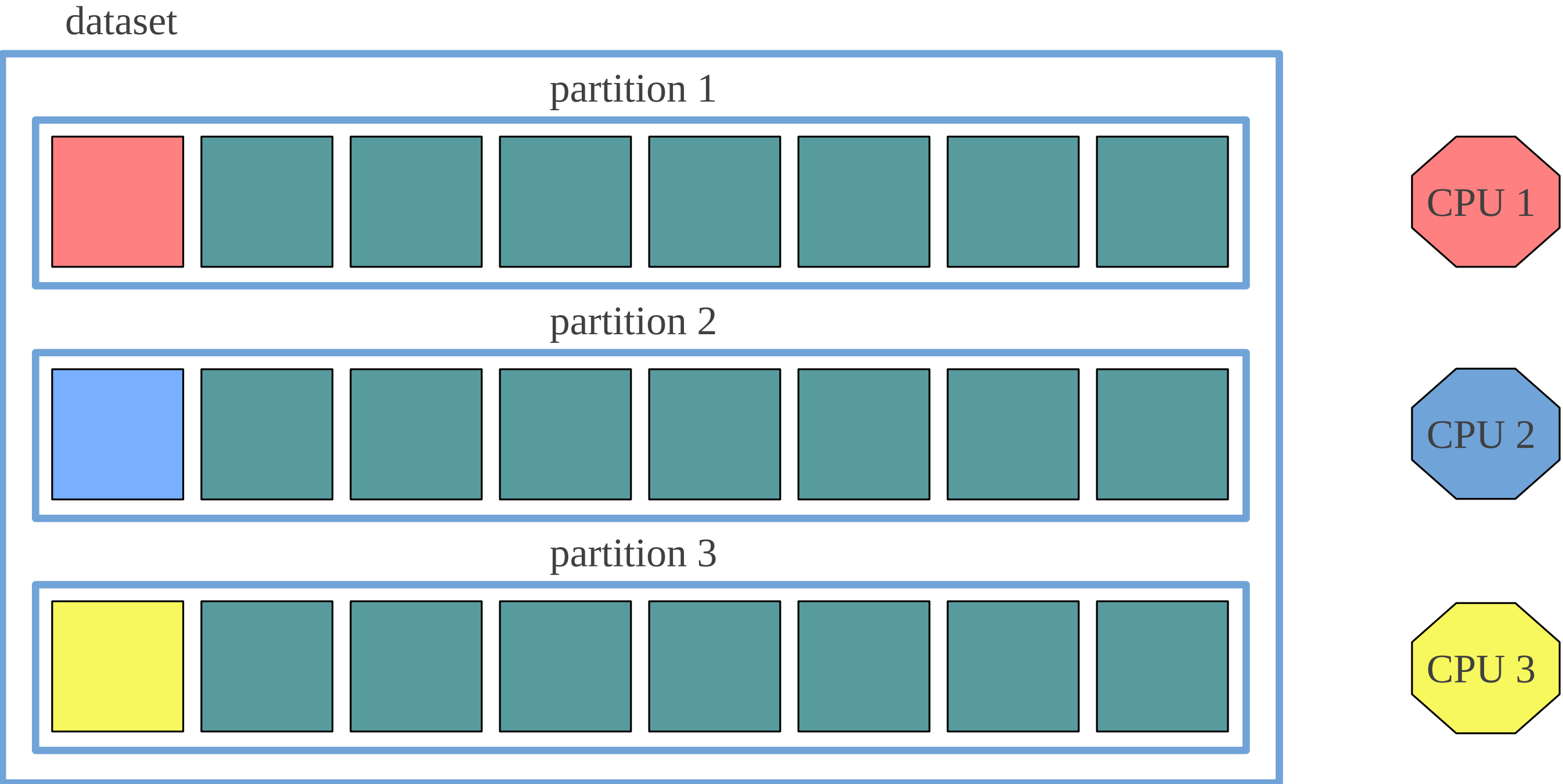
# Sequential iteration



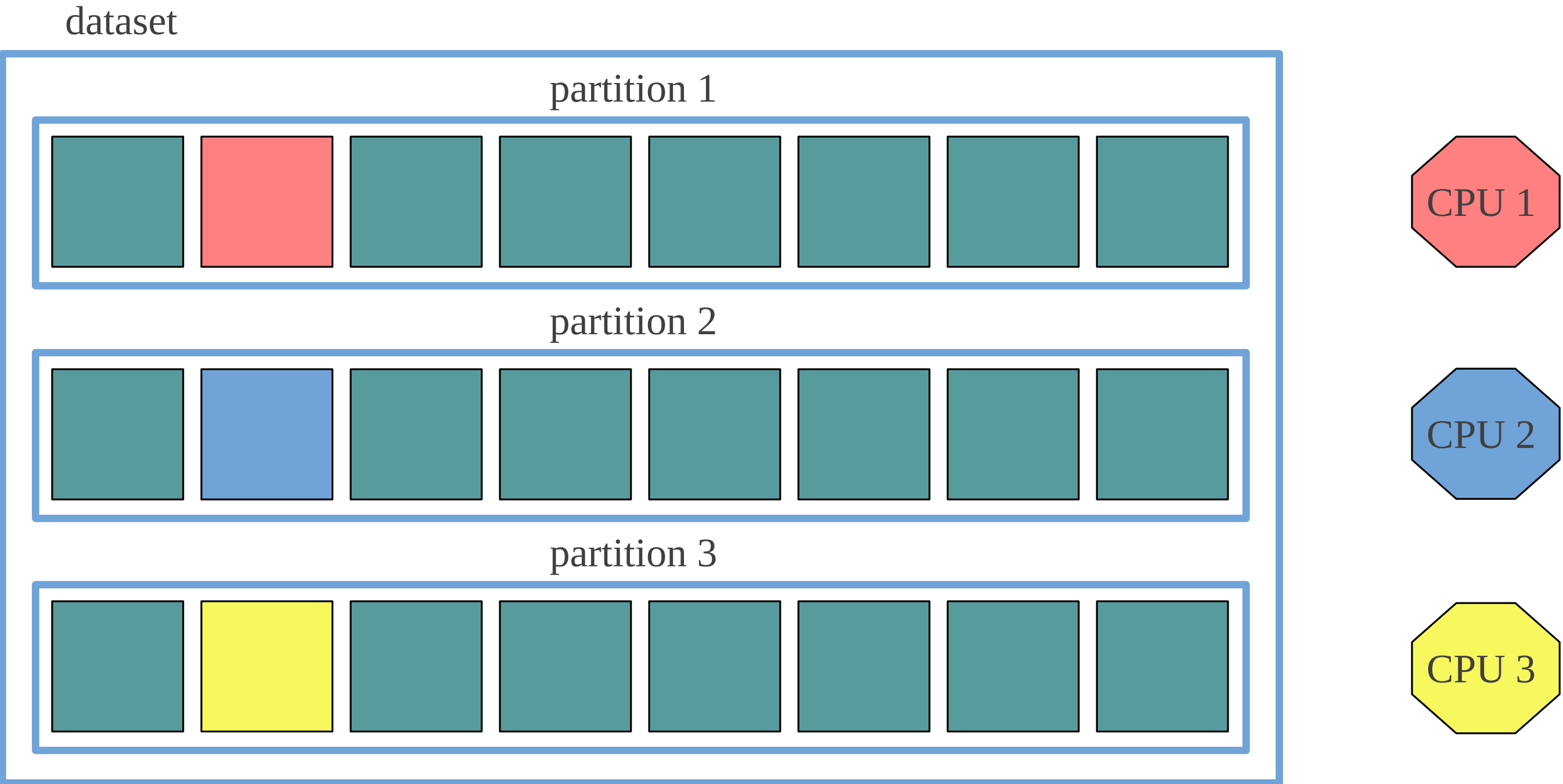
# Parallel iteration



# Parallel iteration

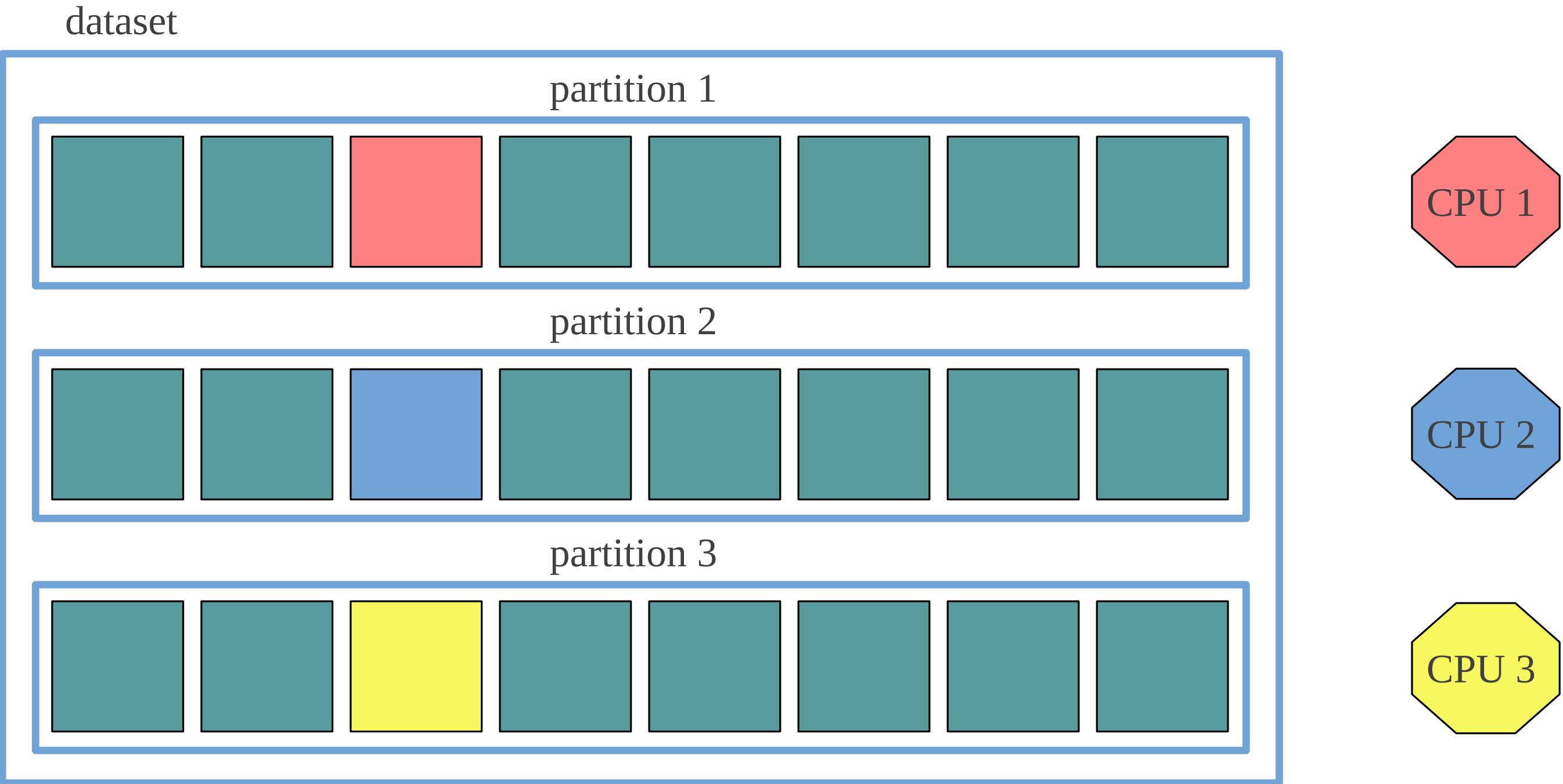


# Parallel iteration

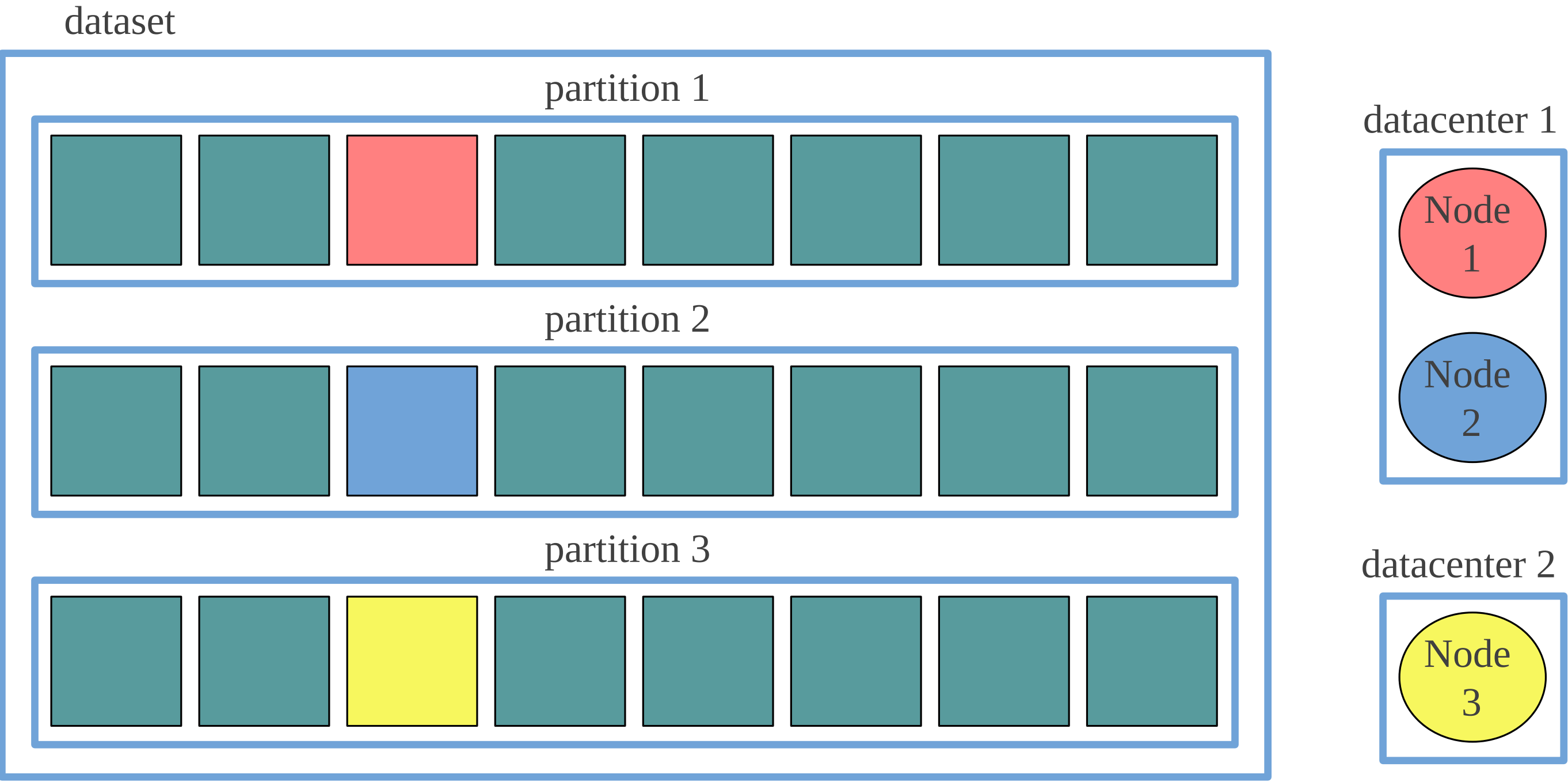




# Parallel iteration

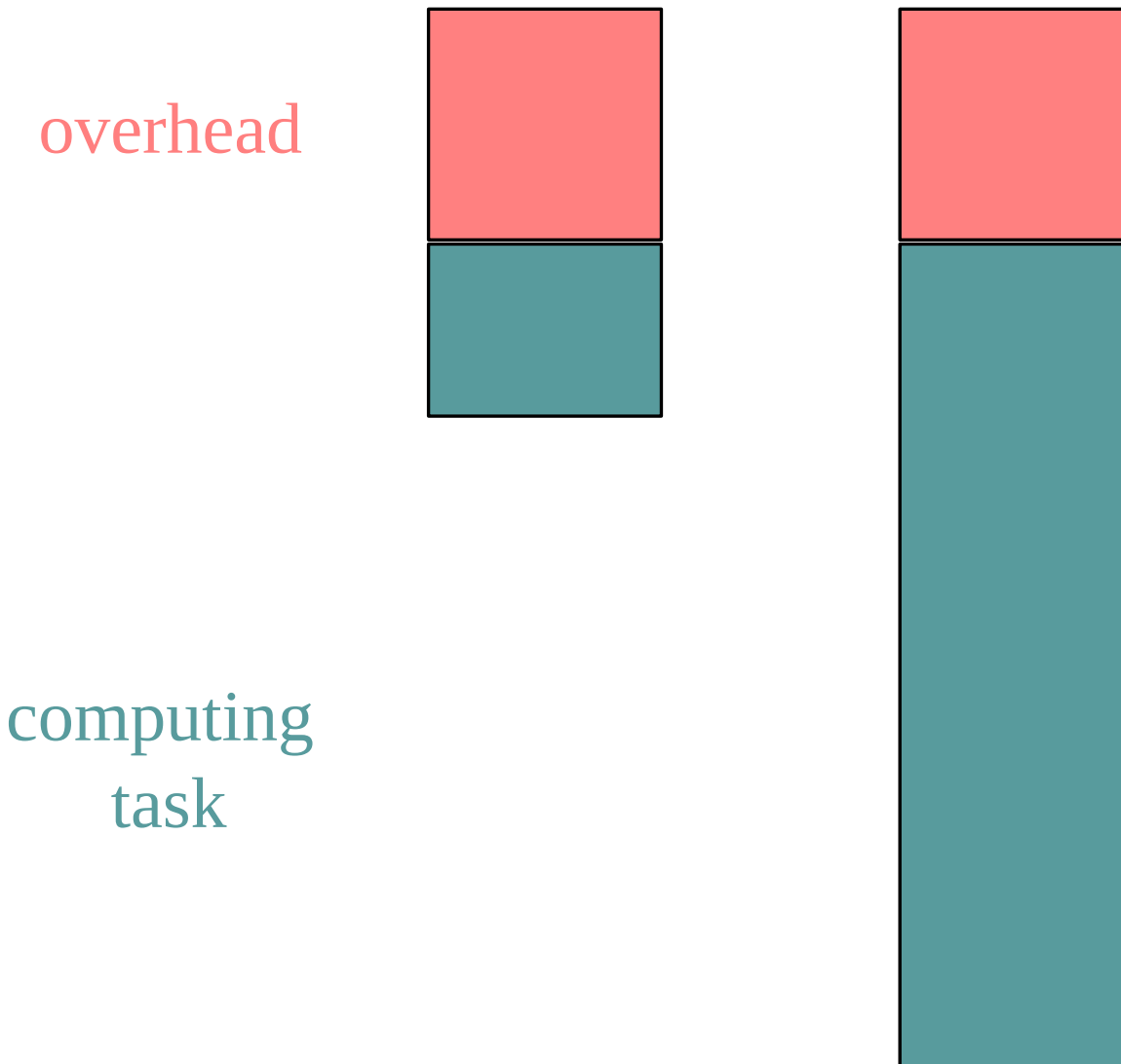


# Parallel iteration



# Important points

## 1. Size the partitions appropriately



# Important points

1. Size the partitions appropriately
2. Benchmark and configure

# Important points

1. Size the partitions appropriately
2. Benchmark and configure
3. Parallel process leads to the same result as the sequential one

The background of the image is a light blue gradient with a complex network of thin, light blue lines connecting various circular nodes. The nodes are also light blue, with some appearing slightly larger or more prominent than others. The network is distributed across the entire frame, creating a sense of interconnectedness and data flow.

# TemperatureNotebook.scala

# foldLeft

foldLeft per partition



foldLeft per partition

foldLeft per partition

foldLeft per partition

foldLeft per partition

foldLeft per partition

foldLeft per partition

foldLeft per partition

foldLeft per partition



foldLeft per partition

foldLeft per partition

foldLeft per partition

All partitions folded

**foldLeft intermediate results**

**foldLeft intermediate results**

**foldLeft intermediate results**

**foldLeft intermediate results**



foldLeft intermediate results

**foldLeft intermediate results**

# foldLeft

The background of the slide features a complex, abstract network of light blue lines and dots. The dots, representing nodes, are of varying sizes and are interconnected by thin, light blue lines, creating a web-like structure that spans the entire background. The overall aesthetic is clean and modern, with a focus on geometric and network-inspired patterns.

# TemperatureExercises.scala

# monoFoldLeft use $n + 1$ default value

 foldLeft per partition

 foldLeft per partition

# monoFoldLeft requires combine to be associative

 foldLeft per partition

```
(a1 combine a2 combine a3)  
(b1 combine b2 combine b3)
```

# monoFoldLeft requires combine to be associative

 foldLeft per partition

```
(a1 combine a2 combine a3) combine  
(b1 combine b2 combine b3)
```

# monoFoldLeft requires combine to be associative

 foldLeft per partition

```
(a combine b combine c) combine  
(d combine e combine f)
```

==

```
(a combine b combine c combine d) combine  
(e combine f)
```