# Miller Name-indexed data tool

## CONCEPTS

Miller handles records with named fields, not lines: verbs see $name, so column order rarely matters.

**Input format** --icsv, --ijson
↓ records
**Verb chain** cat, sort, put ...
↓ then
**Next verb** each sees the previous output
↓ records
**Output format** --opprint, --ojson

Main flags come first, then verbs joined by then, then file names: mlr {flags} verb [opts] then verb [opts] {files}.

## FORMATS AND I/O

`mlr --icsv --opprint <verb> <file>`
Read CSV, pretty-print

`mlr --c2j <verb>`
CSV in, JSON out

`mlr --c2p <verb>`
CSV in, aligned table out

`mlr --j2c <verb>`
JSON in, CSV out

`mlr --io json <verb>`
JSON in and out

## INSPECT AND SLICE

`mlr <fmt> cat`
Pass records through (convert format)

`mlr <fmt> head -n <n>`
First n records

`mlr <fmt> head -n 1 -g <field>`
First record of each group

`mlr <fmt> tail -n <n>`
Last n records

`mlr <fmt> count -g <field>`
Records per group

`mlr <fmt> summary`
Per-column statistics overview

## FIELDS

`mlr <fmt> cut -f a,b`
Keep only these fields

## FIELDS (cont.)

`mlr <fmt> cut -x -f a,b`
Drop these fields

## FILTER AND COMPUTE (DSL)

`mlr <fmt> filter '$x > 5 && $y == "a"'`
Keep records where true

`mlr <fmt> filter '$name =~ "^ab"'`
Regex match on a field

`mlr <fmt> put '$new = $a . "-" . $b'`
Create or set a field (dot joins)

`mlr <fmt> put 'if ($x > 0) {$s = "pos"} else {$s = "neg"}'`
Conditional

`mlr <fmt> put '@sum += $x; end {emit @sum}'`
Accumulate and emit at end

## AGGREGATE

`mlr <fmt> stats1 -a mean,sum,count -f <f>`
Summary stats of fields

`mlr <fmt> stats1 -a p50,min,max -f <f> -g <g>`
Percentiles and extremes by group

`mlr <fmt> count-distinct -f <field>`
Count each distinct value

## SORT AND DEDUPE

`mlr <fmt> sort -f <field>`
Lexical ascending

`mlr <fmt> sort -nr <field>`
Numeric descending

## JOIN AND COMBINE

`mlr <fmt> join -j <id> -f <left> <right>`
Inner join on a field

## NEST AND RESHAPE

`mlr <fmt> nest --evar ';' -f <field>`
Split a cell into records