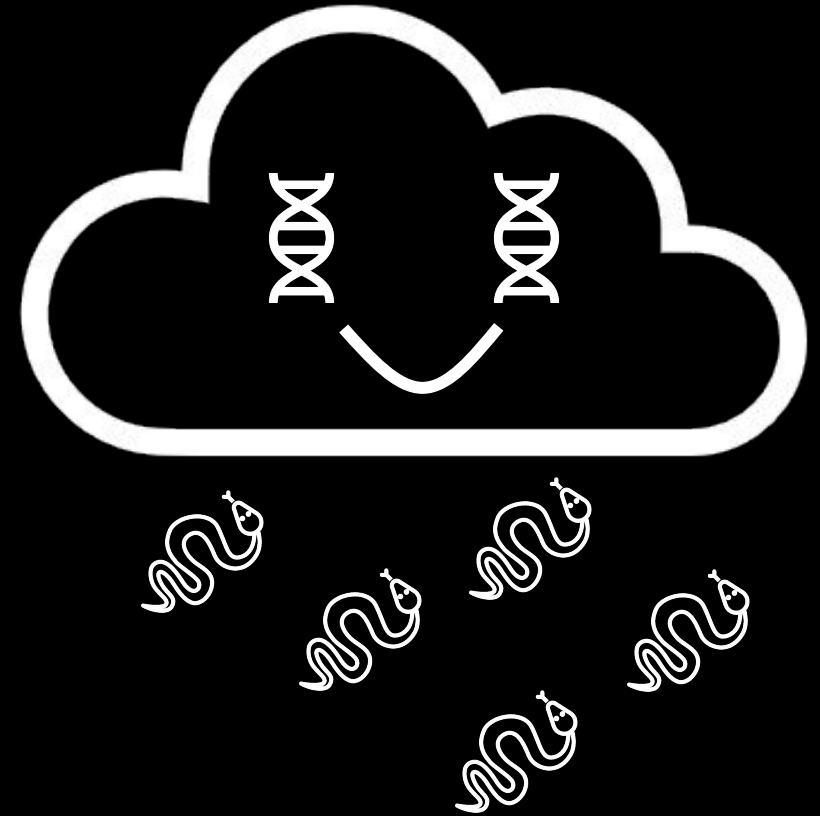


Making snakes in the cloud to study evolution

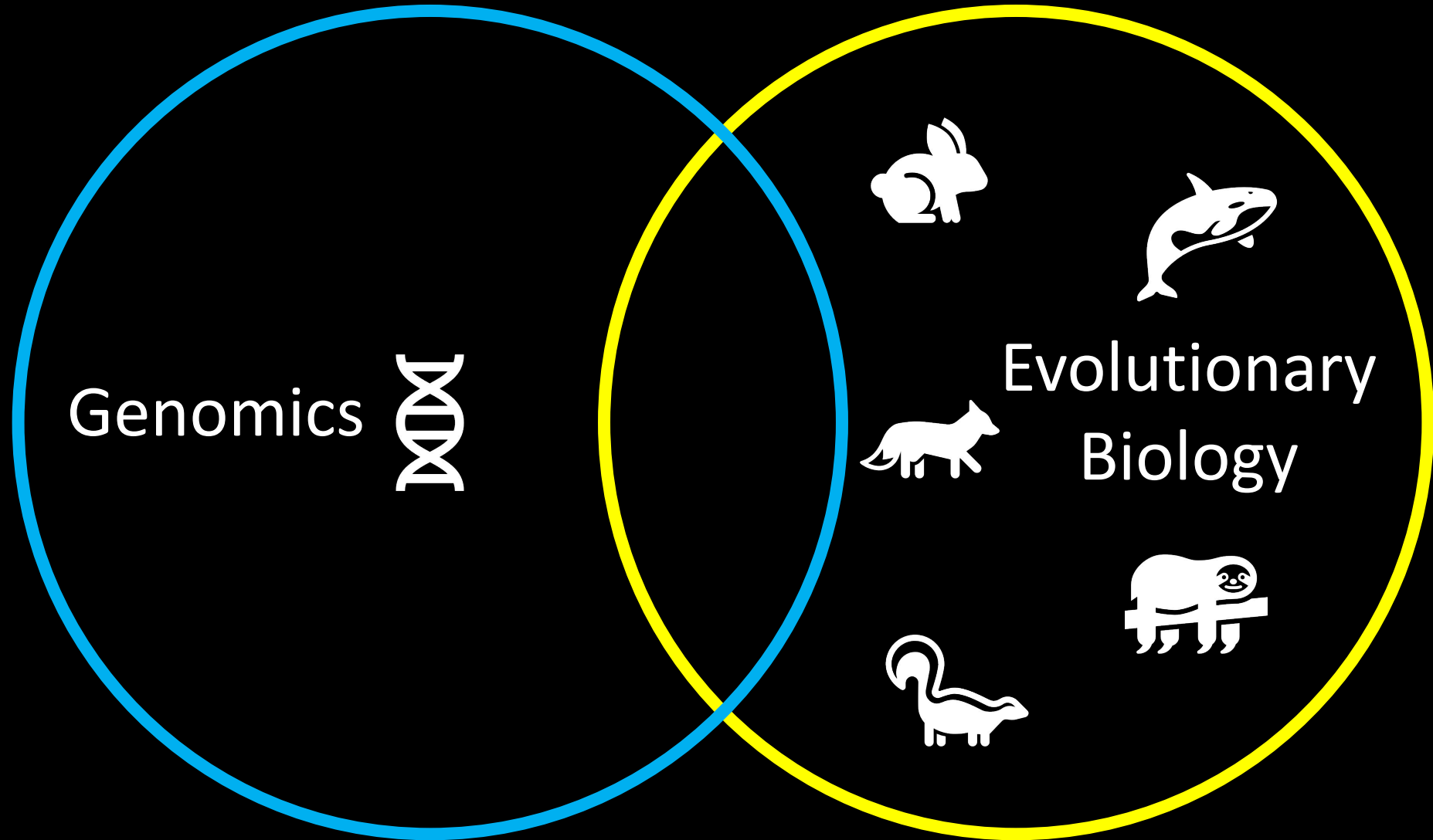
Miles Roberts

Genetics and Genome Sciences

2023-05-05



How does life on Earth change over time?



My cloud computing project has two parts:

Snakemake

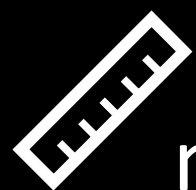


Kubernetes





Snakemake builds workflows



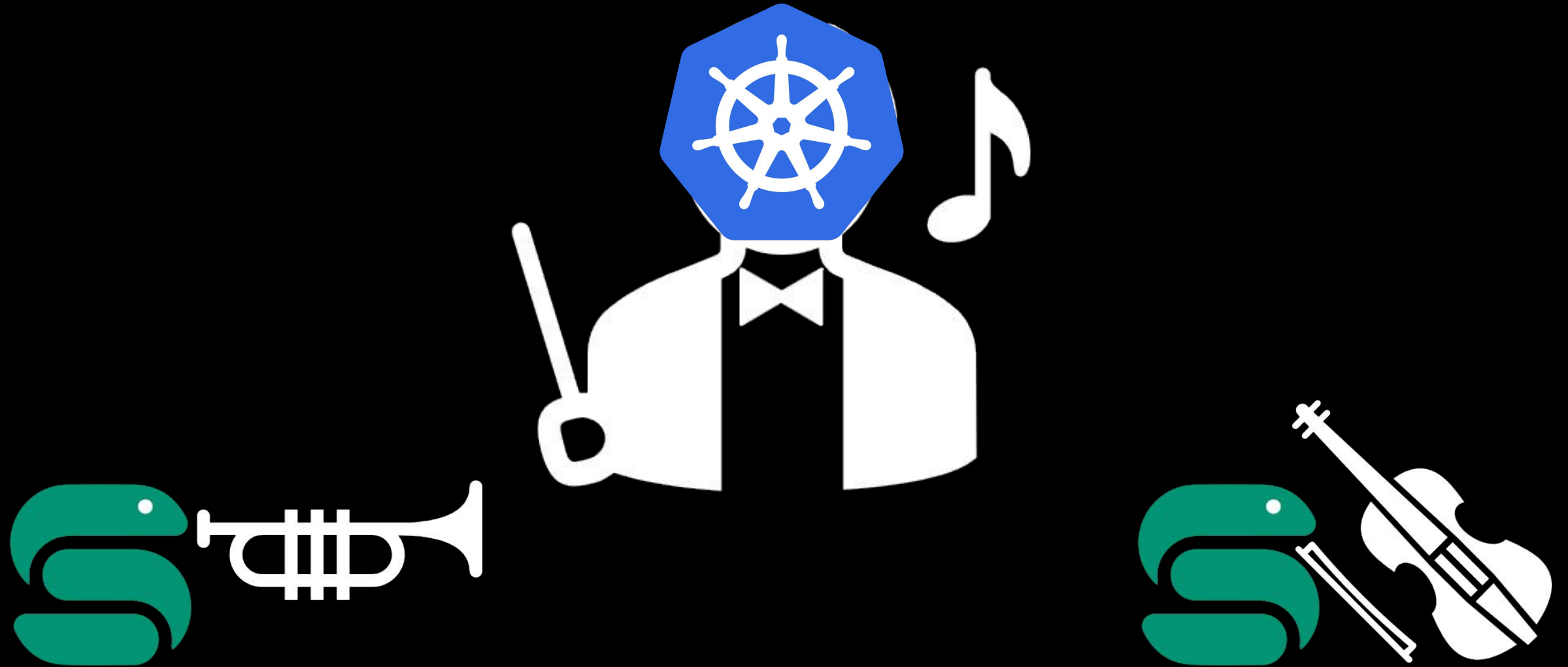
Raw
measurements



Publication
figure



Kubernetes orchestrates processes



I built a “snake” for simulating evolution in a cloud-based Kubernetes cluster

Table of simulation
parameters



Evolution
simulator

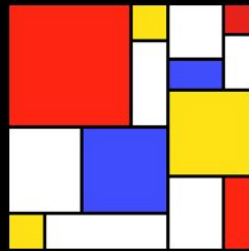
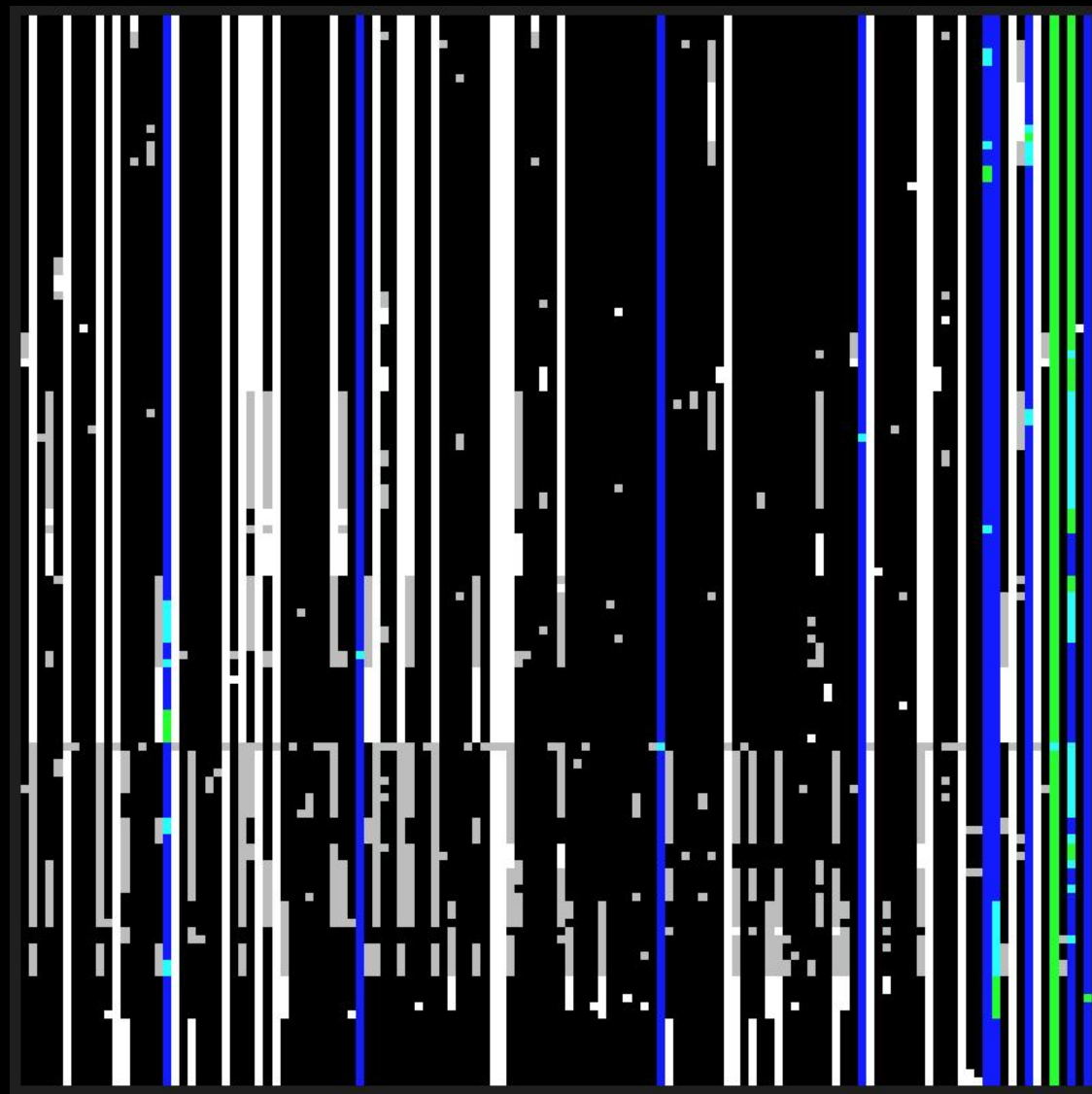


Image
generation



In total, I spent about \$1.00

This is what it looks like:



Still working on...

Extending
the
workflow

Dynamic
resource
allocation

Using GPUs
instead of
CPUs

Feel free to follow my footsteps

<https://github.com/milesroberts-123/snakemake-aks-tutorial>



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