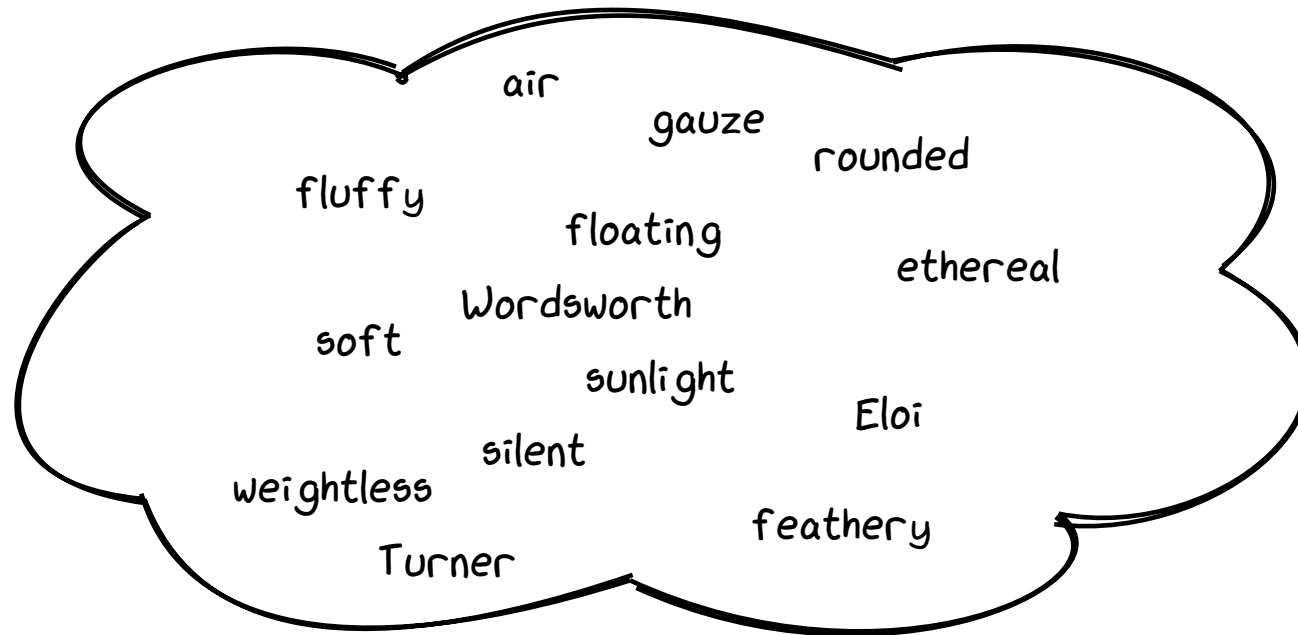


THE BOTTOMLESS DATACENTRE

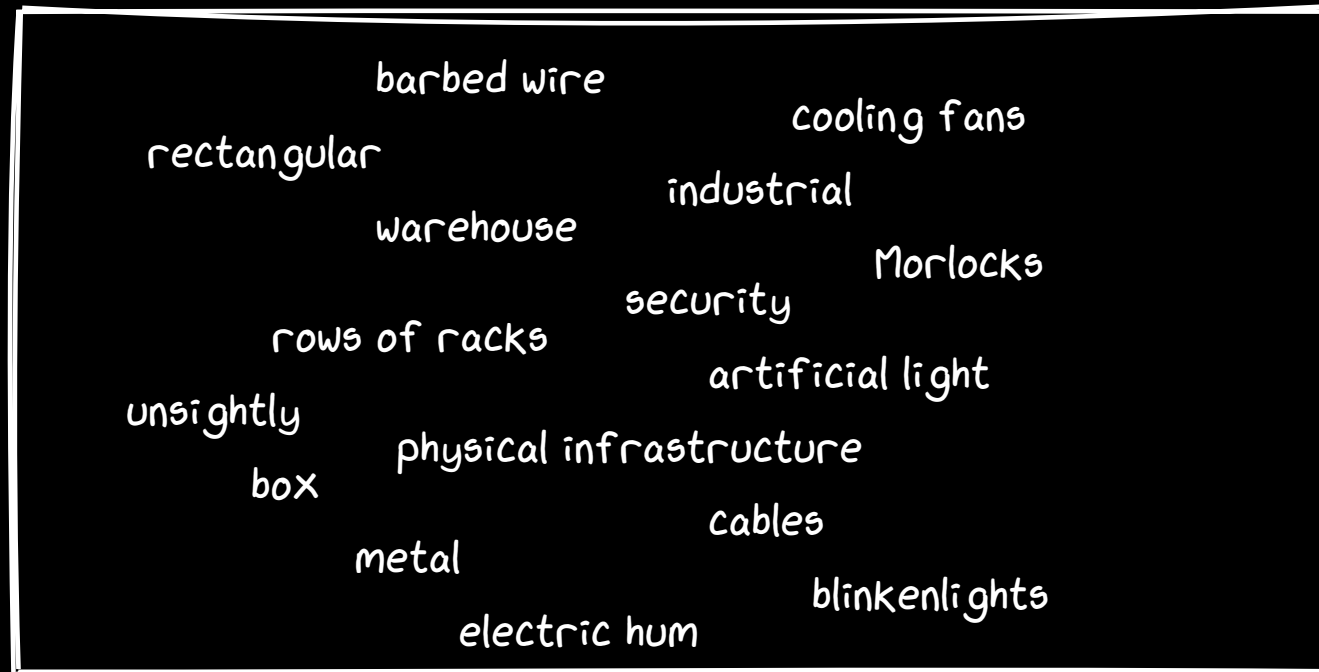


sustainable cloud computing

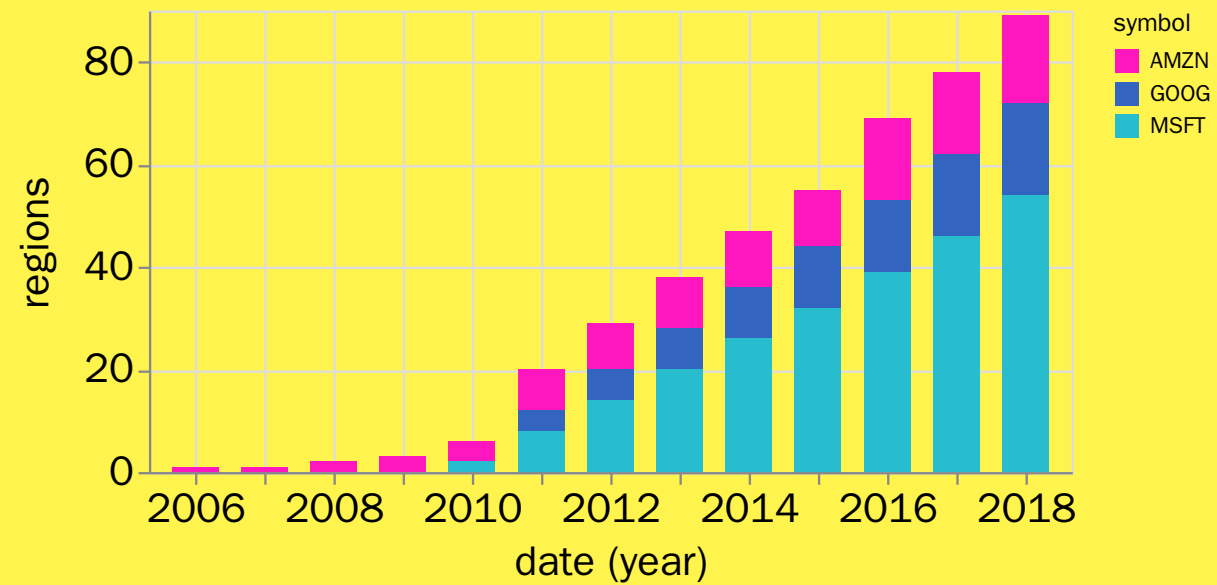
NEWSPEAK



GROUNDING



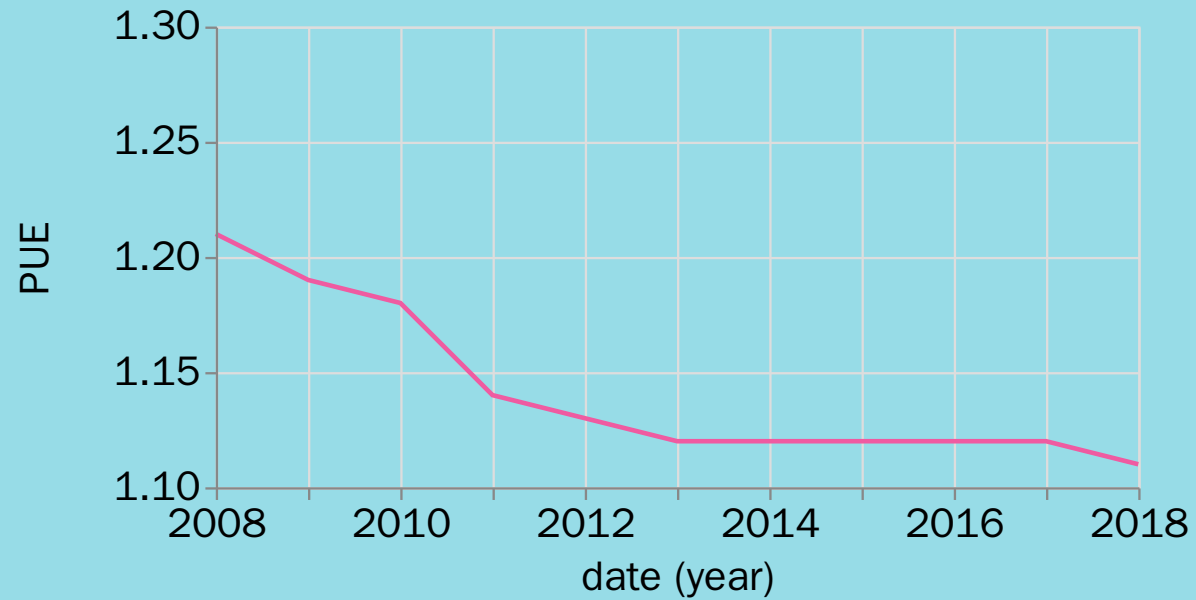
COMPUTE-1 AND UP



Region data based on the [AWS](#), [GCP](#) and [Azure](#) blogs.
Some missing data points interpolated.

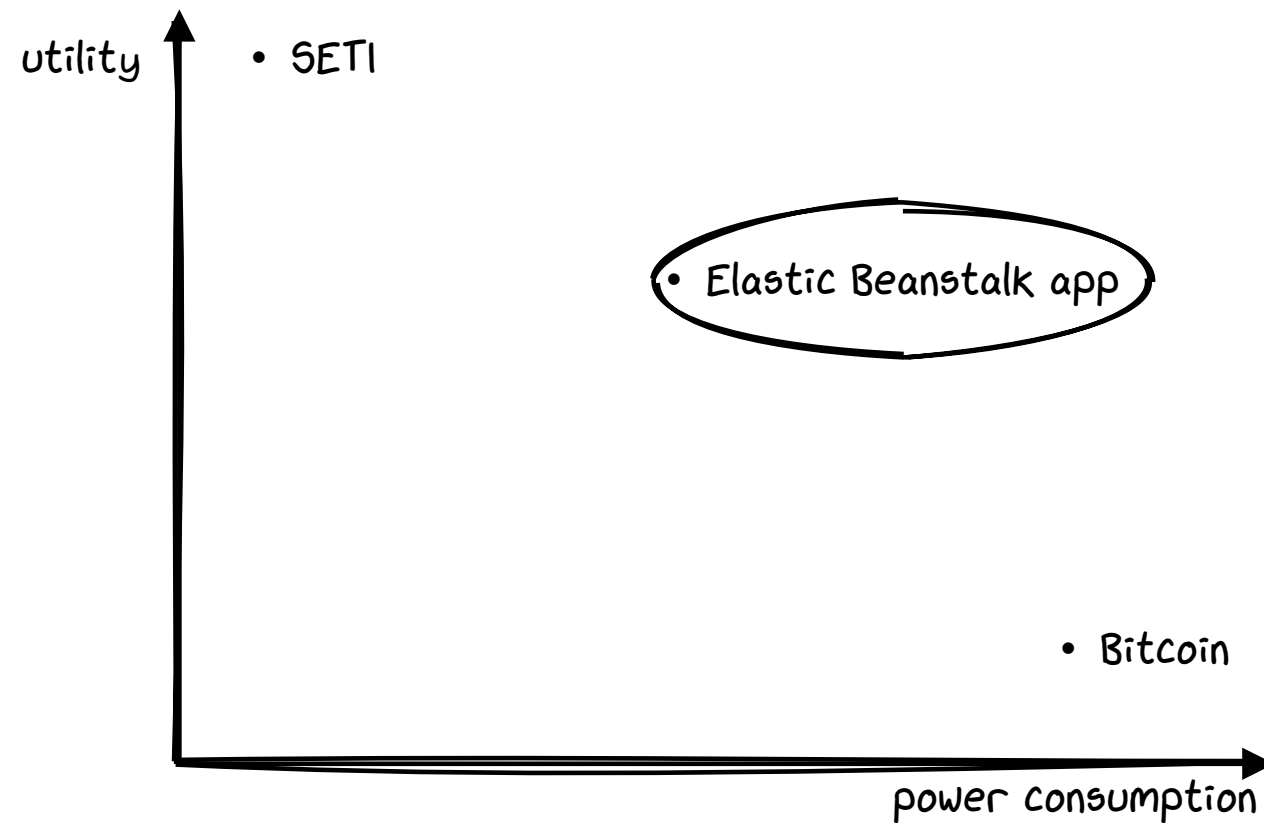
INCENTIVES

$$\text{PUE} = \frac{\text{Watts in}}{\text{IT watts}}$$

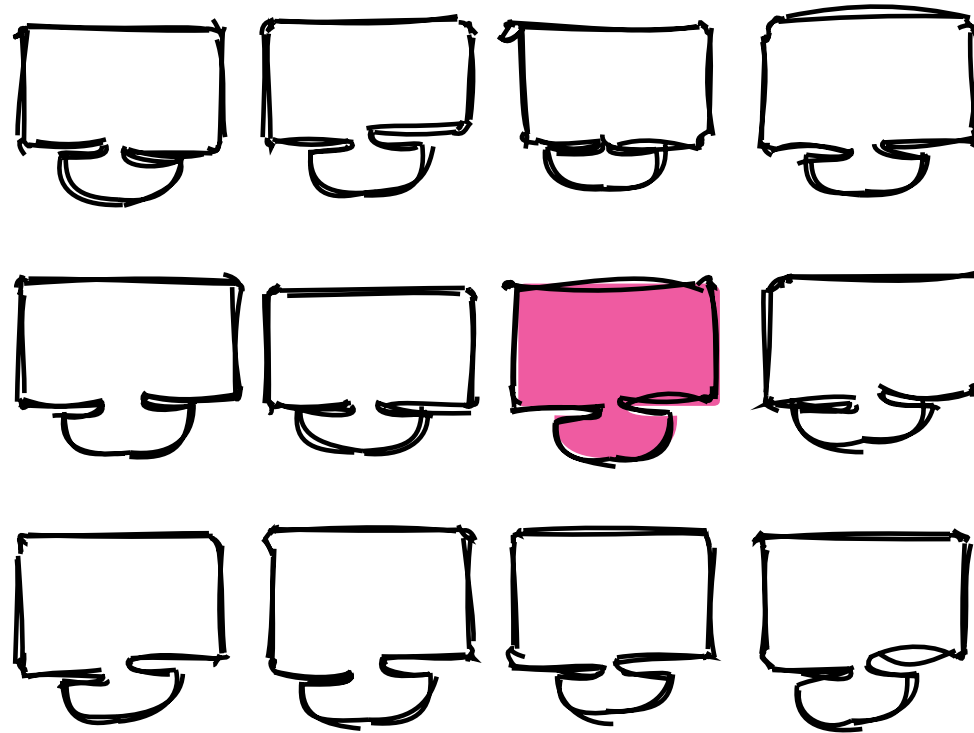


Power usage effectiveness data by [Google Data Centers](#).

INFINITE BEANSTALK

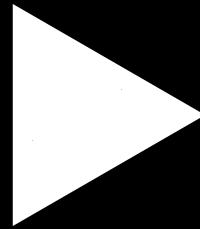


1,000,000 SCREENSHOTS

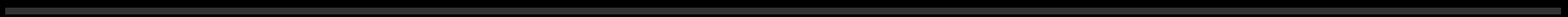


PHOENIX CI

bash-4.4\$



00:00

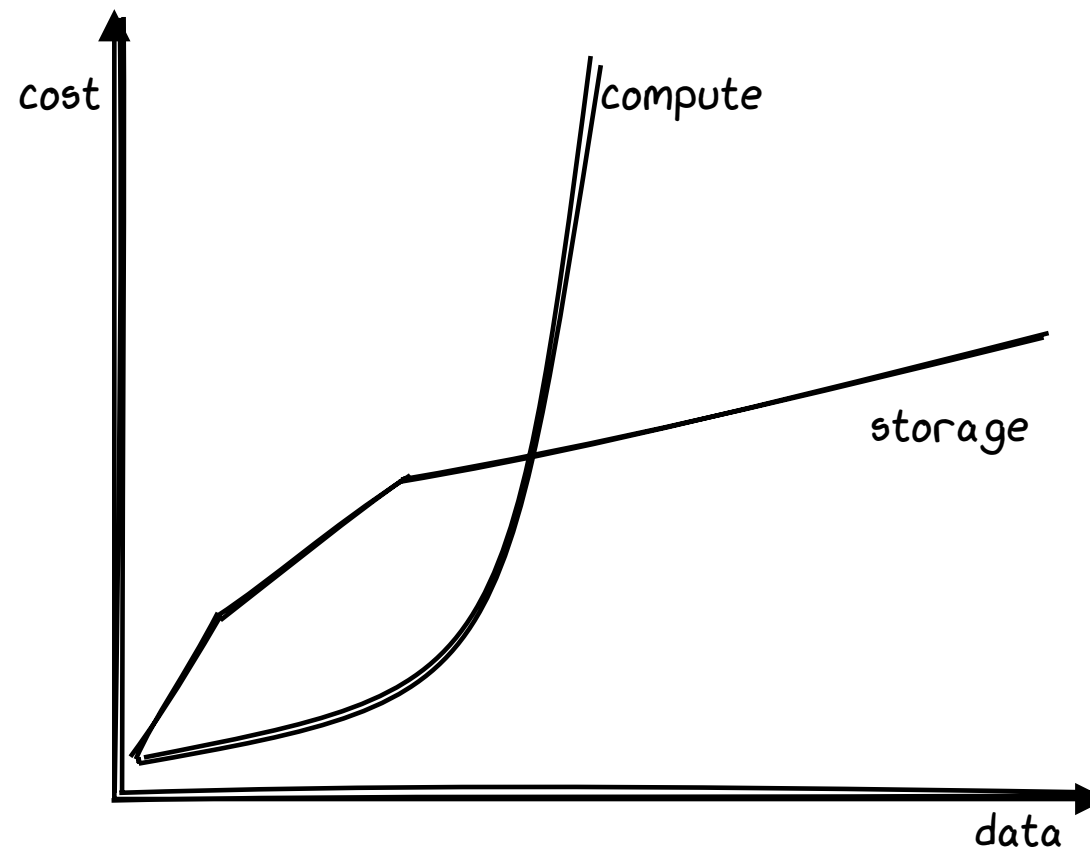


RECIPE

```
FROM golang:1.11.1 as builder
WORKDIR /go/src/github.com/gerald1248/k8s-network-policy-viewer/
COPY * ./
RUN go mod download && go get && go vet && go test -v -cover && \
    go build -o k8s-network-policy-viewer .
```

```
FROM ubuntu:18.10
WORKDIR /app/
EXPOSE 8080
COPY --from=builder ../k8s-network-policy-viewer /usr/bin/
USER 1000
CMD ["k8s-network-policy-viewer", "-s=true"]
```

TOTAL COST OF HOARDING



THE VIEW FROM LE MANS



Program to where the performance puck is going to be,
not where it has been

– DHH

Source: D.H. Hansson. 2016. [Signal v. Noise](#).

THE MISSING THREE PER CENT

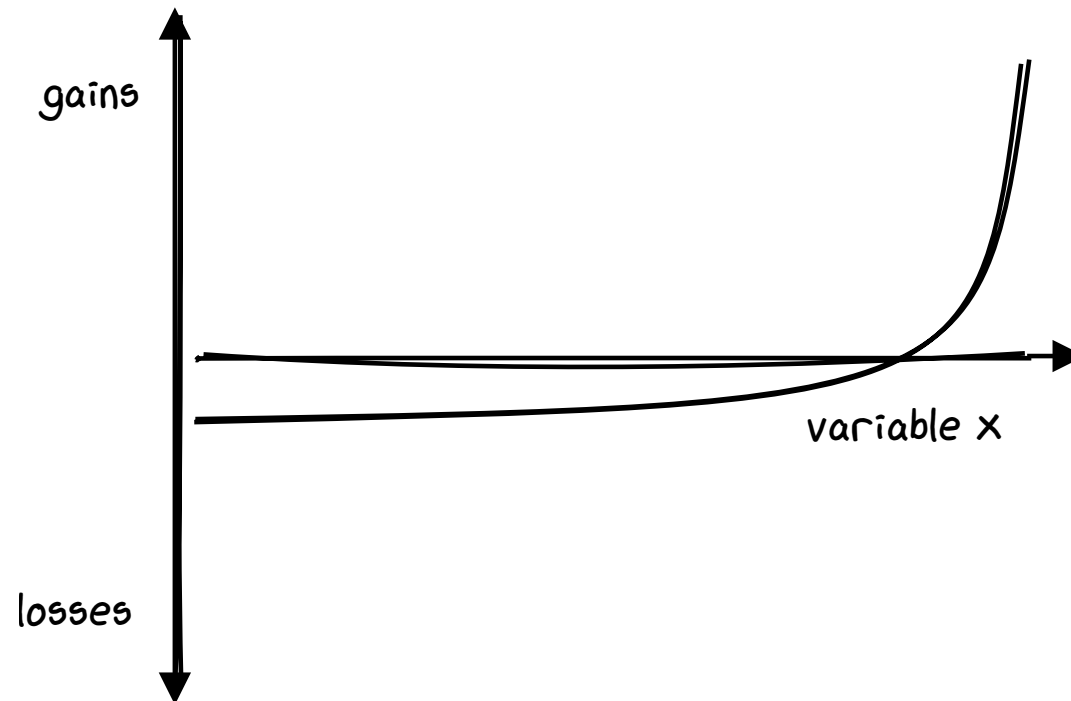


We should forget about small efficiencies,
say about 97% of the time:
premature optimization is the root of all evil

– Donald Knuth

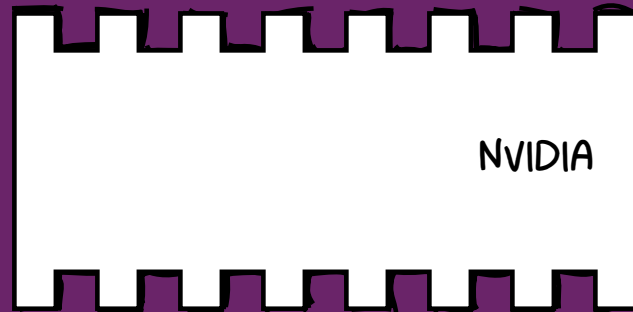
Source: D. Knuth. 1974. "Turing Award Lecture." *Comm. ACM* 17 (1974), p. 671.

ASYMMETRY



Adapted from N.N. Taleb. 2012. *Antifragile*. NY: Random House, p. 273.

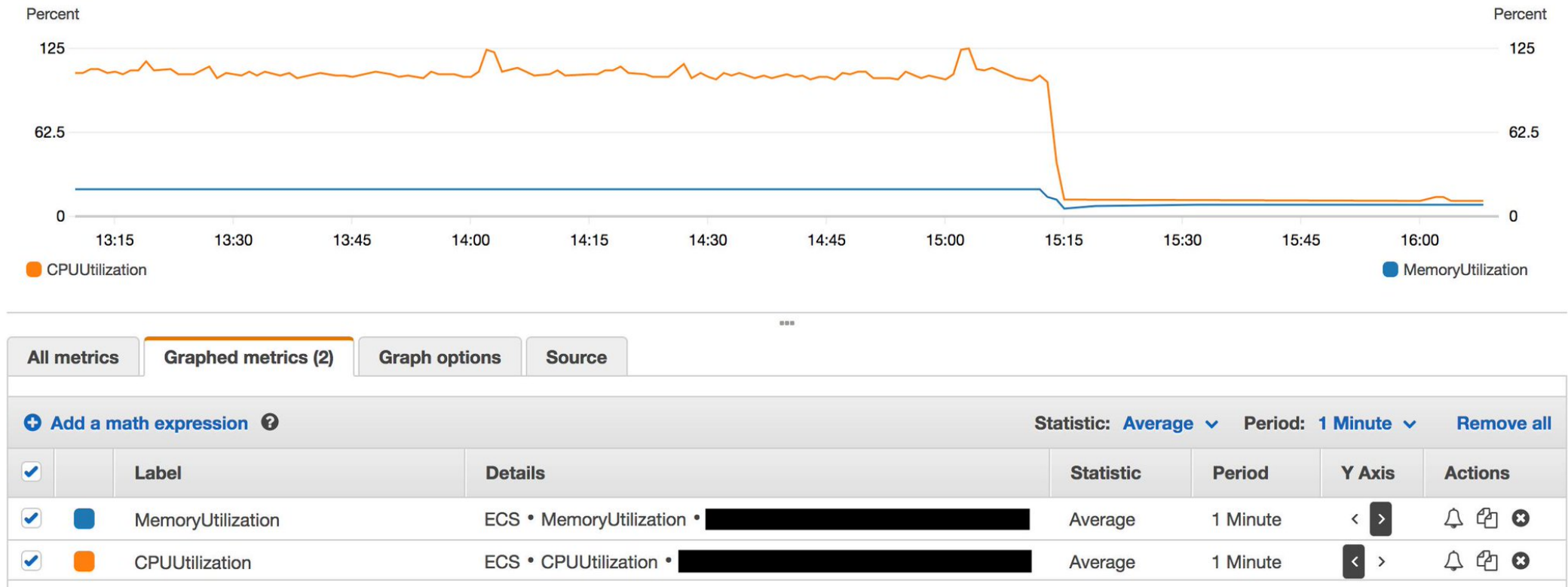
LENSING



```
qcl::environment env;  
  
const cl::Platform& platform =  
    env.get_platform_by_preference({"NVIDIA", "AMD", "Intel"});  
qcl::global_context_ptr global_ctx =  
    env.create_global_context(platform, CL_DEVICE_TYPE_GPU);
```

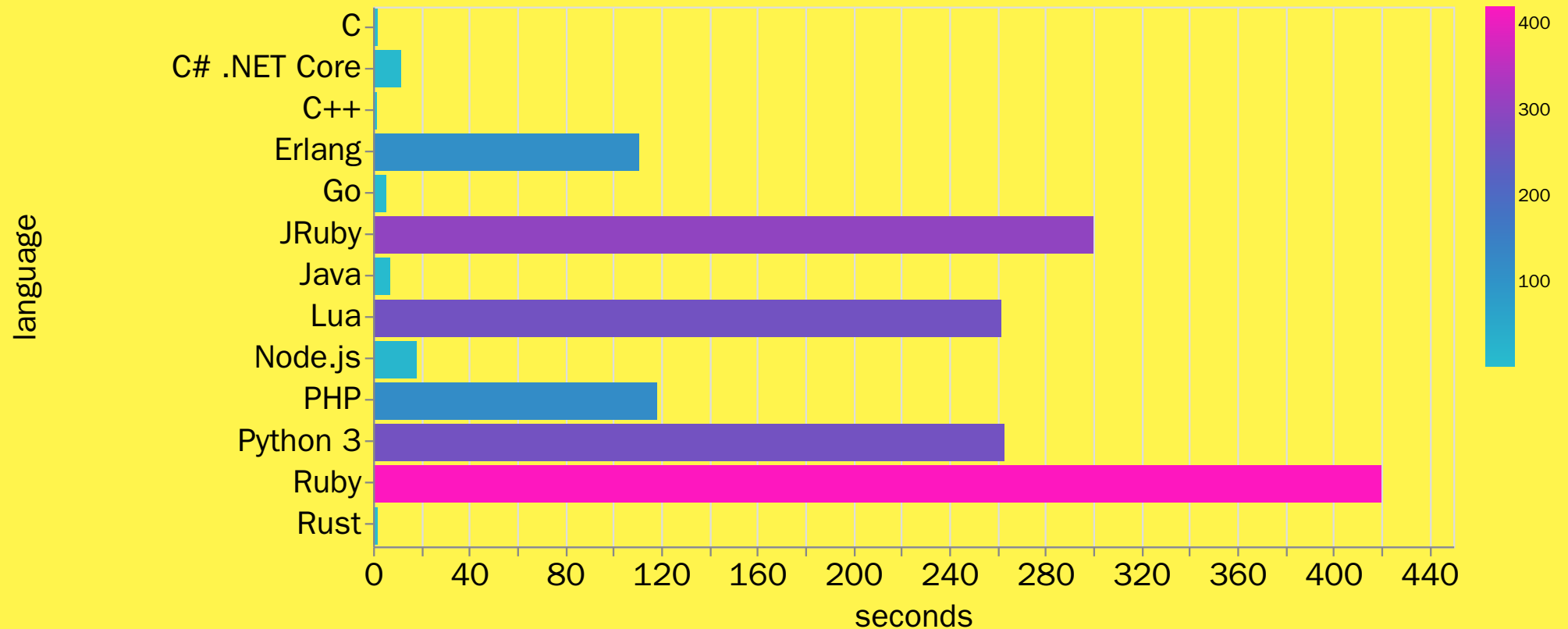
Source: A. Alpay. 2018. github.com/illuhad/teralens. Publication forthcoming.

ENCODING



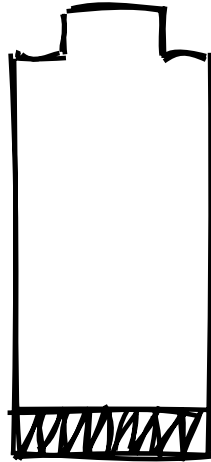
Source: twitter.com/rossipedia/status/1101266107178967040.

MANDELBROT

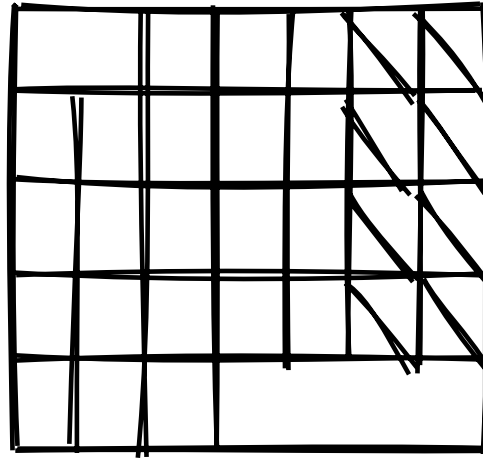


Source: benchmarksgame-team.pages.debian.net.

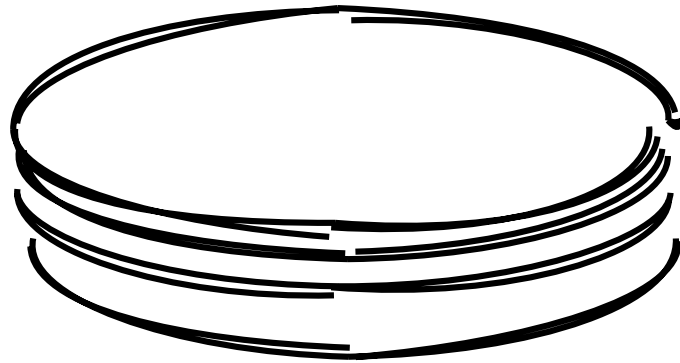
MOBILE



EMBEDDED



PAY FOR WHAT YOU USE



MAXIMISE THE WORK NOT DONE



THANK YOU

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