

GUIs are luxury items in the science world

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Our GUI is slowing platform updates



We delay backend updates because we fear breaking the frontend

The frontend is fragile: it depends on all backend components working flawlessly



Why are we building a GUI again ?

They really do make certain tasks easier

Every consumer/commercial application has one

It makes for livelier demos than a bash terminal

We can show “something” to management

```
File Edit View Search Terminal Help
(birdy) david@DavidH-linux:
(birdy) david@DavidH-linux:
Usage: birdy tg_mean [OPTIONS]
```

Mean daily mean temperature
series by taking the mean

Options:

```
--version      Show the v
--tas COMPLEX  Resource
--freq TEXT    Frequency.
-h, --help     Show this
```

```
(birdy) david@DavidH-linux:
Usage: birdy [OPTIONS] COMM
```

Birdy is a command line c

Documentation is availabl
<http://birdy.readthedocs.>

Options:

```
--version      Show th
--cert TEXT     Client
               private
-S, --send      Send cl
-s, --sync      Execute
-t, --token TEXT Token t
-h, --help     Show th
```

Commands:

```
tg [tg_opts]
tg [tg_opts]
```

GUIs are expensive

Typically use 30 to 50% of a project's budget

Frontend technologies evolve fast

Developers may be harder to recruit and retain

Low tolerance to malfunction

Unlikely to benefit from outsiders' Pull Requests

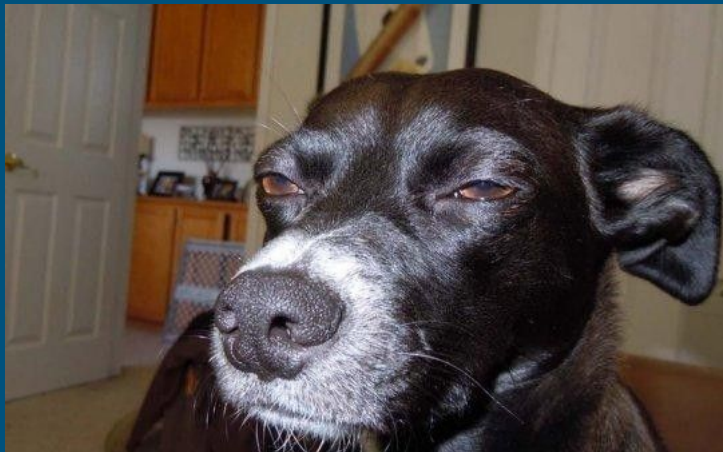


Scientists are understandably wary of GUIs

You can review a script, but *typically* can't review GUI interactions

Legitimate doubts about the life expectancy of frontend applications

I have a talk tomorrow and the platform is down, what now ?



Canarie tested GUI-avoidance strategies



Let users launch virtual machines

Provide only a backend and API

Develop very focused GUIs for a few key tasks

Questions we should have asked ourselves

Is the GUI valuable to researchers or is it a promotional tool ?

Is the backend mature enough to support a GUI ?

What are the opportunity costs of the GUI ?



Some suggestions for funders

Challenge proposals on the need for a GUI

Interview platform PIs and write “lessons learned” case studies

The research software ecosystem needs a predator





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