Hi.
Requests
HTTP for Humans

```python
c>> r = requests.get('https://api.github.com/user', auth=('user', 'pass'))
c>> r.status_code
c200
c>> r.headers['content-type']
'application/json; charset=utf-8'
c>> r.encoding
'utf-8'
c>> r.text
u'{"type":"User"...'
c>> r.json
{u'private_gists': 419, u'total_private_repos': 77, ...}
```
github.com/kennethreitz

- ~20 serious projects.
- 100+ experiments.
- OSX-GCC-Installer: 56TB of downloads.
- Requests: 80+ million downloads.
Safe Harbor


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Confusion as a Service

SaaS, IaaS, & PaaS.

SaaS (software) → For software users.
More features, transparent updates.
Facebook, Basecamp, Trello, etc.

IaaS (infrastructure) → For operations people.
On demand machine resources.
AWS, Digital Ocean, etc.

PaaS (platform) → For developers.
Transparent updates, no servers.
Heroku, App Engine, etc.
DEMO
Heroku:

Run exactly the processes you tell us to run.
Python, Locally.

pip & virtualenv

$ virtualenv venv
$ source bin/activate
$ pip install -r requirements.txt
Python, on Heroku.

pip & deployed

$ pip install -r requirements.txt
Python, Locally.
Running an example webserver.

$ python manage.py runserver 0.0.0.0:8000
Python, on Heroku.
Running an example webserver.

$ cat Procfile
web: python manage.py runserver 0.0.0.0:8000
What's a Dyno?

Not a Server

Not a VM
A Dyno is a Process, running in a Container.
Interacting with Dynos.
Scaling a multi-process web application.

$ cat Procfile
web: python manage.py runserver
worker: python manage.py celeryd -E -B

$ heroku scale web=2
$ heroku scale worker=3:standard-1x
Run Arbitrary Commands.
Managing a multi-process web application.

$ heroku run python manage.py migrate
...

$ heroku run python
...

$ heroku run bash
...
Addon Services
Managed and provisioned infrastructure resources.

Postgres
Redis
Kafka

Memcached
Mongo
Email
Metrics
Logging
Interacting with Addons.

Augmenting a multi-process web application.

$ heroku addons:create heroku-postgresql
$ heroku addons:create sentry
Interacting with Addons.
Augmenting a multi-process web application.

$ heroku config

=== pure-plateau-37918 Config Vars
DATABASE_URL: postgres://xxx:xxx@xxx.compute-1.amazonaws.com:5432/xxx
SENTRY_DSN: https://xxx:xxx@app.getsentry.com/xxx
Application Configuration.

Configuring a multi-process web application.

$ heroku config:set hello=world
Setting hello and restarting pure-plateau-37918... done, v5
hello: world

$ cat example.py
import os

who = os.environ.get('hello', 'you')
Tutorial Time!

hrku.co/pycon101