

bionode.io



Queen Mary
University of London

“Modular and universal bioinformatics”



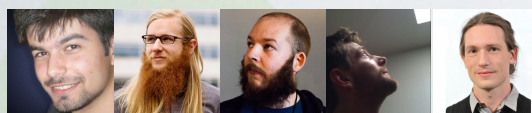
- Streamable UNIX command line tools
- JavaScript / Node.js API
- Bioinformatic on the server and browser

Download all sequence for spiders

```
~ bionode ncbi download sra spiders | bionode sra fastq-dump -
```

<http://try.bionode.io>

Core team



Community



Collaborations



dat-data.com
biojs.net

Improve usability and robustness

All programming skills welcome (**even none**).

<http://bit.ly/biocw15>

Bioinformatics workflows in Node-RED

<http://nodered.org>

Extending Leaf.bio with Docker, Dat and Bionode

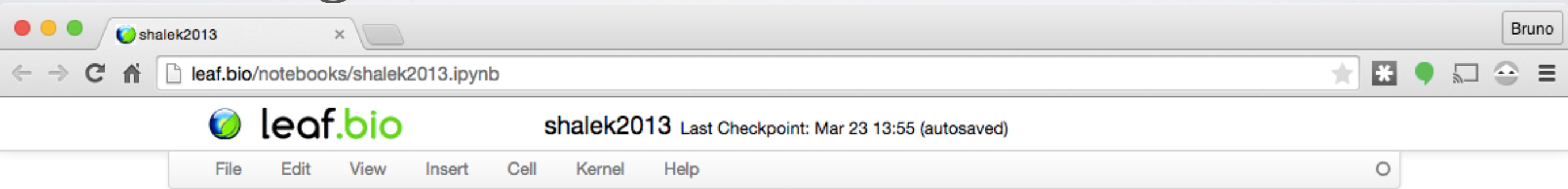
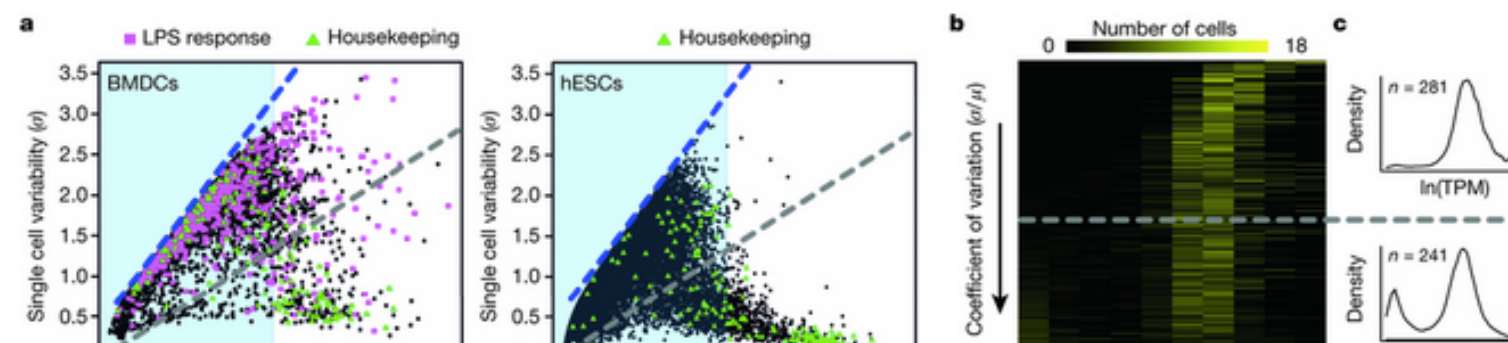


Figure 2

Next, we will attempt to recreate the figures from [Figure 2](#):



Reformat data



1 Edge



dat samples OUT → IN attach UUIDs from

```
{ "_id": 1818689, "_rev": "1-  
ce9f539f75aaa91d7186bd6a21133e20", "uid":  
1818689, "title": "4 Solenopsis invicta  
adult mother queens from colony 403",  
{ "_id": 1818690, "_rev": "1-  
33e8926772953750be2e8c0e0c9e0a82", "uid":  
1818690, "title": "4 Solenopsis invicta  
adult mother queens from colony 408",  
{ "_id": 1818695, "_rev": "1-
```



dat samples



attach UUIDs from levelgraph



attach dat reads



attach dat assemblies



attach dat projects



attach dat papers



distinguish relevant data



dat summary



summarise



core/output

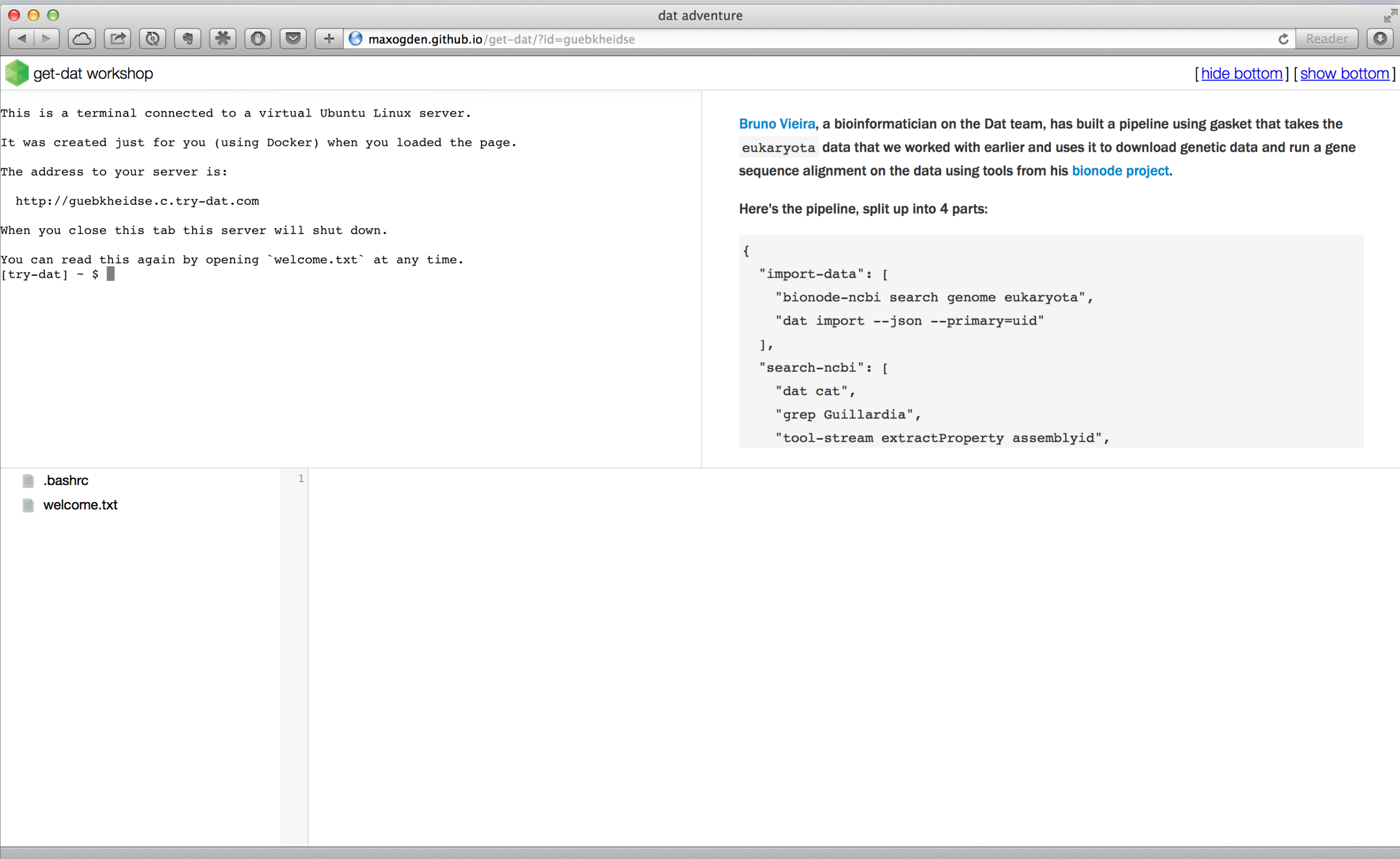
ws://100.68.44.188:50...

running

Preview

Maximize

```
{ _id: 1108978,  
  description:  
    [ 'female',  
      'GSE39959: DNA methylomes of the fire ar  
      'DNA methylomes of the fire ant Solenops  
      'We used whole bodies of four different  
    projects: [ 172199 ],  
    papers: [],  
    assemblies: [],  
    reads: [ { '225468': [Object] } ] }  
{ _id: 1108979,  
  description:  
    [ 'Alate queen',  
      'female',  
      'GSM982305: Alate queen; Solenopsis invi  
      'GSE39959: DNA methylomes of the fire ar  
      'GSM982305: Alate queen',  
      'DNA methylomes of the fire ant Solenops  
      'We used whole bodies of four different  
    projects: [ 172199 ],  
    papers: [],  
    assemblies: [],  
    reads: [ { '225469': [Object] } ] }
```



<http://bit.ly/try-dat>