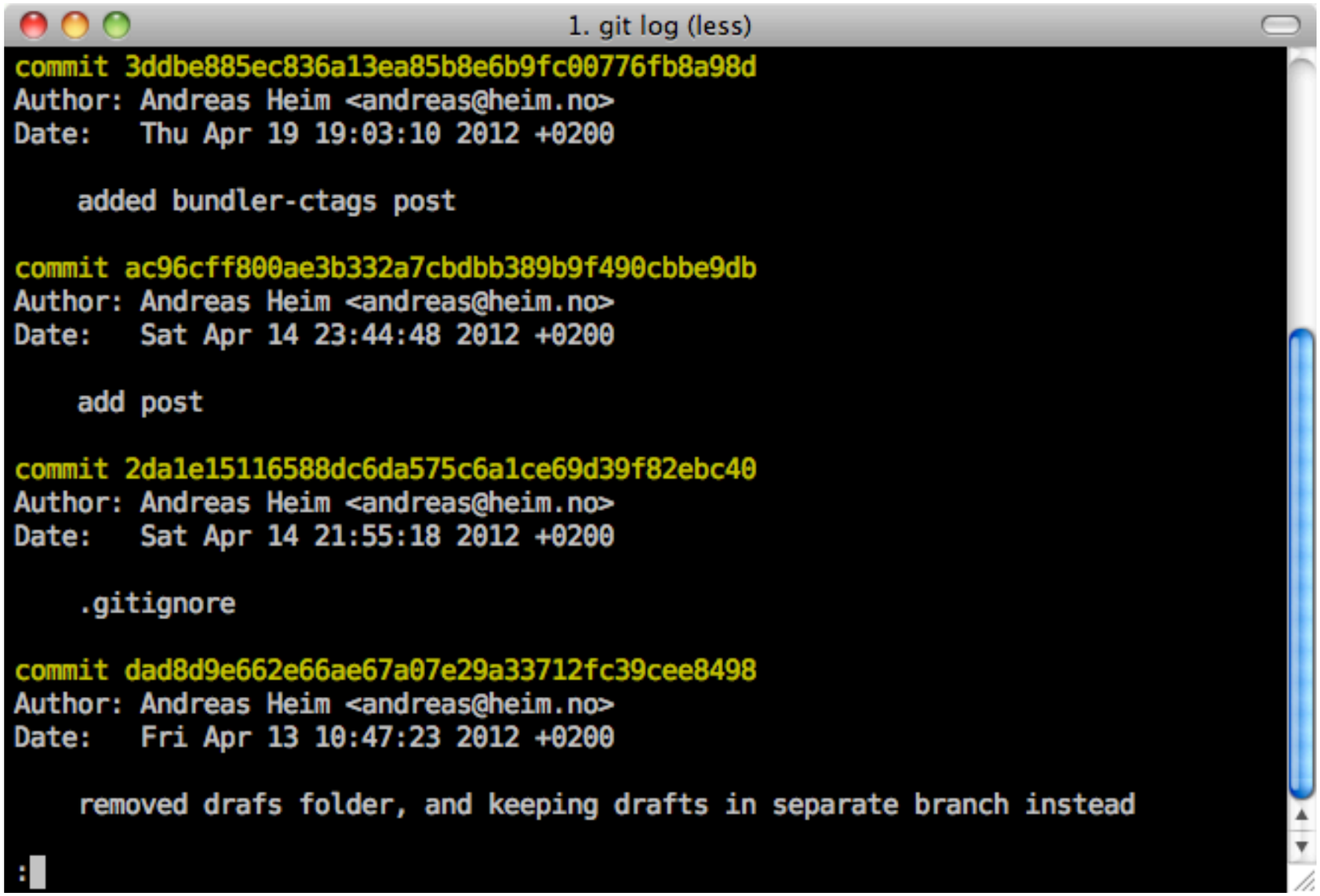
BEKK

# *VISUALISERING AV KILDEKODE*

*Javazone 2012*

*Andreas Heim*

# git log


1. git log (less)
commit 3ddbe885ec836a13ea85b8e6b9fc00776fb8a98d
Author: Andreas Heim <andreas@heim.no>
Date:   Thu Apr 19 19:03:10 2012 +0200
added bundler-ctags post
commit ac96cff800ae3b332a7cbdbb389b9f490cbbe9db
Author: Andreas Heim <andreas@heim.no>
Date:   Sat Apr 14 23:44:48 2012 +0200
add post
commit 2da1e15116588dc6da575c6a1ce69d39f82ebc40
Author: Andreas Heim <andreas@heim.no>
Date:   Sat Apr 14 21:55:18 2012 +0200
.gitignore
commit dad8d9e662e66ae67a07e29a33712fc39cee8498
Author: Andreas Heim <andreas@heim.no>
Date:   Fri Apr 13 10:47:23 2012 +0200
removed drafs folder, and keeping drafts in separate branch instead
:

# git log --shortstat

1. git log --shortstat (git)

```
commit 3ddbe885ec836a13ea85b8e6b9fc00776fb8a98d
Author: Andreas Heim <andreas@heim.no>
Date:   Thu Apr 19 19:03:10 2012 +0200

    added bundler-ctags post

 1 file changed, 27 insertions(+)

commit ac96cff800ae3b332a7cbdbb389b9f490cbbe9db
Author: Andreas Heim <andreas@heim.no>
Date:   Sat Apr 14 23:44:48 2012 +0200

    add post

 1 file changed, 67 insertions(+)

commit 2da1e15116588dc6da575c6a1ce69d39f82ebc40
Author: Andreas Heim <andreas@heim.no>
Date:   Sat Apr 14 21:55:18 2012 +0200

    .gitignore

 1 file changed, 1 insertion(+)

:
```

shell

regneark

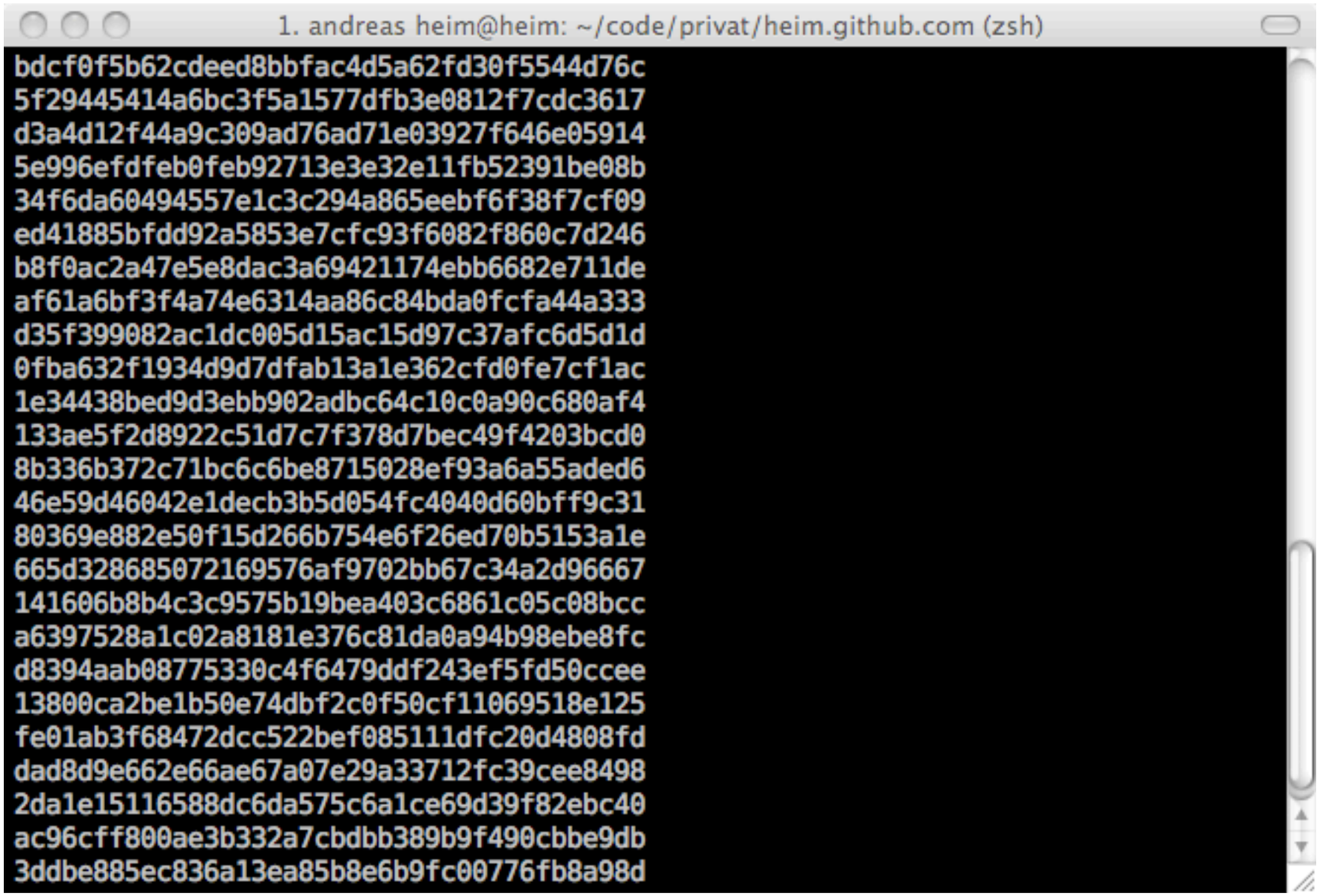
https://github.com/heim/jz12-visualisering-av-kildekode

# oppgave #1

finne størrelse (antall kodelinjer) over tid

# liste alle revisjoner

## git rev-list --reverse HEAD



# finne innhold i en revisjon

## git ls-tree 0fba632f1934

1. andreas heim@heim: ~/code/privat/heim.github.com (zsh)

```
100644 blob fe0d83156165b2c59fc1f99822cc4258e497af40    .rbenv-version
100644 blob 6904bcdd60efe9315801621c3c36d805f7963148    404.html
100644 blob 5c23dacf55300e85a79986c882a87d1cbedd0648    CNAME
100644 blob cd550080075ec51255f313ffe5a598cb5f226d09    Gemfile
100644 blob 3f5fdd781c05da36cdbe8fbe15a991e9df37a936    Gemfile.lock
100644 blob 4405c89a2798267de8a8d7514d740e8ad2c6a761    README.md
100644 blob 3abf4e919ae68778391fb63132ee1677090cbb39    Rakefile
100644 blob 1bdf14b3cd7e5fc5053245bb82d8a6dc45fe41c8    _config.yml
040000 tree cc0d5775ae66d000e782cdc4d8851ac1be8b1e2e    _includes
040000 tree 81639fa1c624c4bbf1dd9ceca3d4667d9fd380a0    _layouts
040000 tree 549880a59e59babf52663b452dfc4b4a07ee044a    _plugins
040000 tree de053b40d27a69e09d55fe6c11f25a53f5a95b9d    _posts
100644 blob dc7c0540e3129bcb7a27e617063d77a152ca67f8    archive.html
040000 tree 3d1b1bca0bfcb62800b78cc3babcc2108a09e699    assets
100644 blob f088ba400382b71766f85100be2eb60e40797a30    atom.xml
040000 tree 753c89f7518d556ca5b11a79c769bfd4887e7f95    attachments
100644 blob cdb8789f50d9bf06bf764afc3ce2afb147e939f8    categories.html
040000 tree d564d0bc3dd917926892c55e3706cc116d5b165e    images
100644 blob 88b3ddc391d822488d8948b65f07e9c39479cef5    index.md
040000 tree d564d0bc3dd917926892c55e3706cc116d5b165e    javascripts
040000 tree f581aeccaa67d7ef3e8f687f90a901ada6d1b5cb    old_site
100644 blob bde1a329fc3c65fe527d16bd5fa7e97e764c1716    pages.html
100644 blob 25c568f502b97fe5a976a0c2cf7d51674293359f    sitemap.txt
100644 blob 5e216cb3b2172022f251b67aca7db4ba2bad05cb    tags.html
100644 blob 2cd0e612d1dcc840646090e5661923b6eb52de05    talks.html
```

# finne *alt* innhold i en revisjon

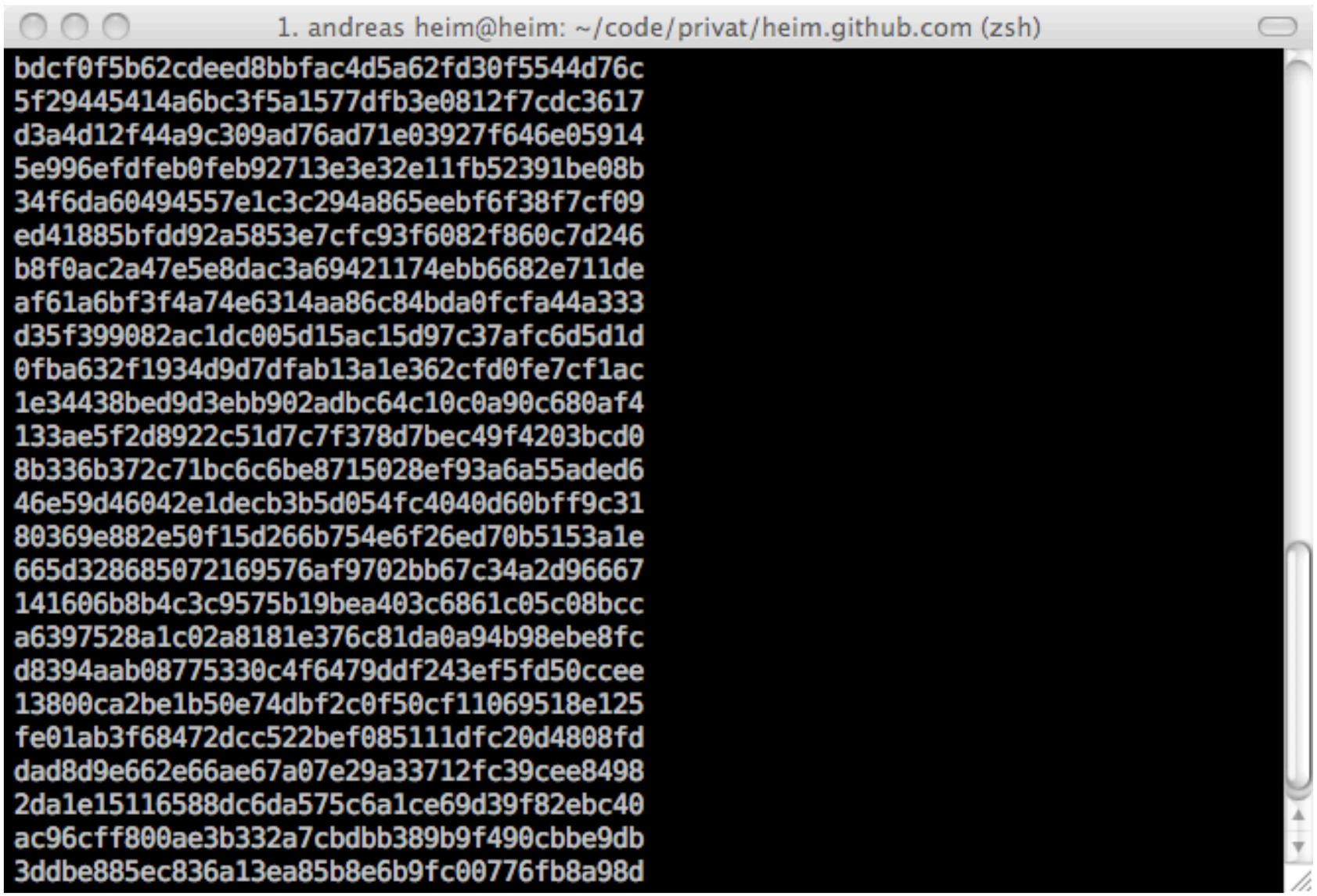
## git ls-tree  -r 0fba632f1934

1. andreas heim@heim: ~/code/privat/heim.github.com (zsh)

```
100644 blob 704b80392b19c421d7b8a2674ec2b12260fae2e4    _includes/JB/comments-pr
oviders/livefyre
100644 blob a5c178323ebf5d0fdf15318271f79fc22e6c37e5    _includes/JB/liquid_raw
100644 blob 42f827a8c74e16909395b9823637cdd64edfb08d    _includes/JB/pages_list
100644 blob f612ade871af7280dfc32727d0f6f4922c792f64    _includes/JB/posts_colla
te
100644 blob efcd84b002a6cd4aac9b6c2ae74c84fd7e9c16b4    _includes/JB/setup
100644 blob f5b11518bd2e5ca9636ad6c7f474f16379f34e90    _includes/JB/sharing
100644 blob 871fa5be42bc0acbcef9cf56e7b5418ceae3de39    _includes/JB/tags_list
100644 blob 0337f5380a0e34d57a5629f66661b803452d802c    _includes/themes/heim/de
fault.html
100644 blob 8c753b9285bfd76d1f7f38e2047a89bceff7cdac    _includes/themes/heim/pa
ge.html
100644 blob 088407acc901b4d1d2ae082cbadf82dbdb176e6d    _includes/themes/heim/po
st.html
100644 blob 787d30601cace3b8734946a8e9a9e6cdf876c788    _includes/themes/heim/se
ttings.yml
100644 blob 45d0ba37d612bf7e0cafbf0ee2c960b46eab93bf    _layouts/default.html
100644 blob 4a80f5efcaab33a7f4987ae359c0dd63ddc36001    _layouts/page.html
100644 blob 8b7726d4f3ca19b81ca123b00161111c0be6ea6a    _layouts/post.html
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391    _plugins/.gitkeep
100644 blob e1dde3979ad59866f26d7d50cd45a315c74d57ac    _plugins/debug.rb
100644 blob e69de29bb2d1d6434b8b29ae775ad8c2e48c5391    _posts/.gitkeep
100644 blob 3a1aeba669f43b4de056422a1e633bc029e2f818    _posts/2012-04-12-some-s
mall-vim-tips.md
```

# plukke ut blob-id'en

git ls-tree -r <rev> | awk '{print $3}'



# sy det sammen pt. I

git ls-tree -r <rev> | awk ‘{print $3}’ |
xargs git show | wc -l

# sy det sammen pt. 2

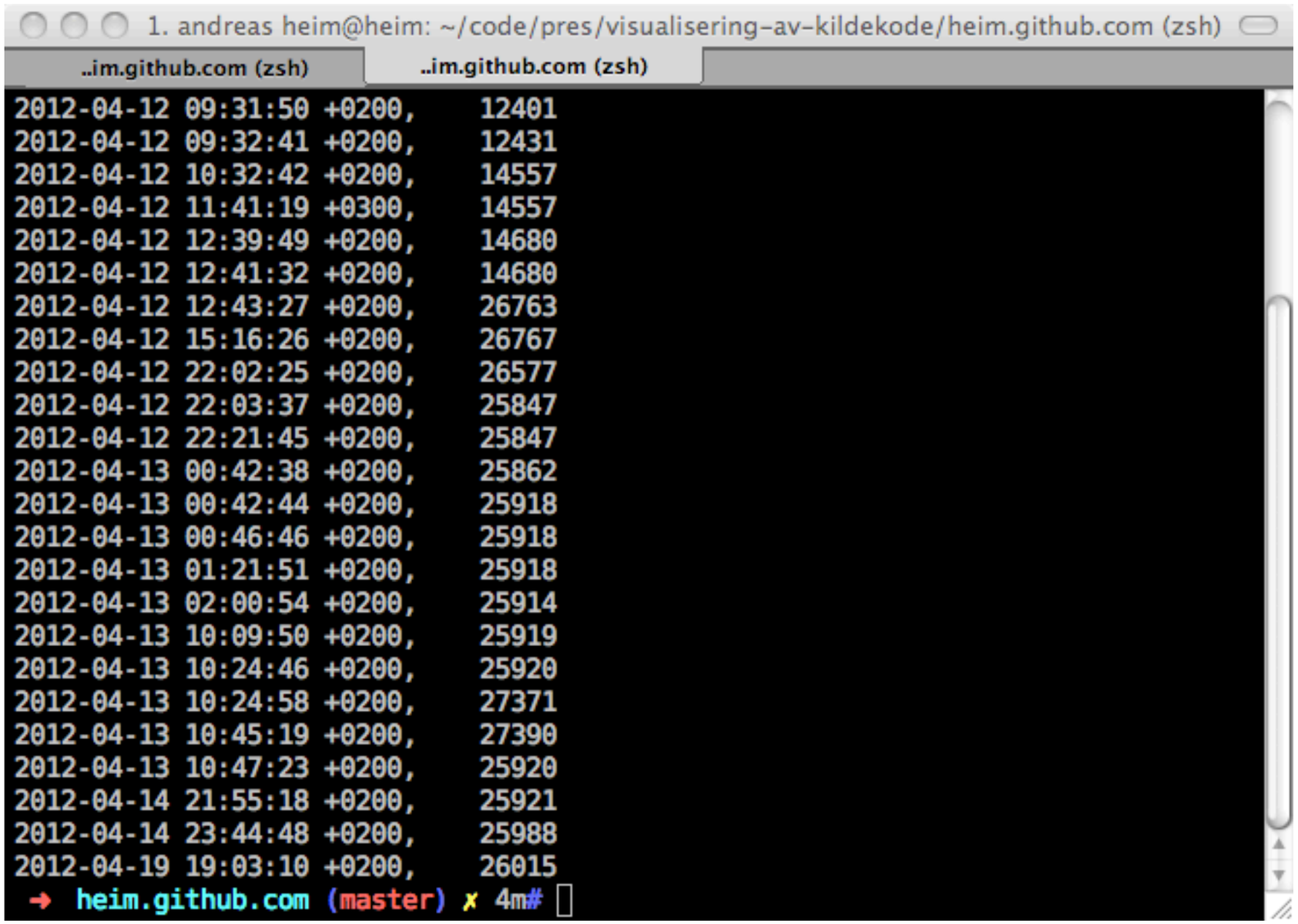
1. vi repo-size.sh (vim)

..im.github.com (zsh) | vi (vim)

```
#!/bin/bash

set -e

function main() {
  git rev-list --reverse  --since="6 months ago" HEAD |
  while read rev; do
    echo "`revision_time`, `line_count`"
  done
}

function line_count() {
  git ls-tree -r $rev |
  awk '{print $3}' |
  xargs git show |
  wc -l
}
function revision_time() {
  git log -1 $rev --pretty=format:"%ai"
}
main
```

"repo-size.sh" 21L, 343C 8,5 All

# output


1. andreas heim@heim: ~/code/pres/visualisering-av-kildekode/heim.github.com (zsh)
..im.github.com (zsh)
..im.github.com (zsh)
2012-04-12 09:31:50 +0200, 12401
2012-04-12 09:32:41 +0200, 12431
2012-04-12 10:32:42 +0200, 14557
2012-04-12 11:41:19 +0300, 14557
2012-04-12 12:39:49 +0200, 14680
2012-04-12 12:41:32 +0200, 14680
2012-04-12 12:43:27 +0200, 26763
2012-04-12 15:16:26 +0200, 26767
2012-04-12 22:02:25 +0200, 26577
2012-04-12 22:03:37 +0200, 25847
2012-04-12 22:21:45 +0200, 25847
2012-04-13 00:42:38 +0200, 25862
2012-04-13 00:42:44 +0200, 25918
2012-04-13 00:46:46 +0200, 25918
2012-04-13 01:21:51 +0200, 25918
2012-04-13 02:00:54 +0200, 25914
2012-04-13 10:09:50 +0200, 25919
2012-04-13 10:24:46 +0200, 25920
2012-04-13 10:24:58 +0200, 27371
2012-04-13 10:45:19 +0200, 27390
2012-04-13 10:47:23 +0200, 25920
2012-04-14 21:55:18 +0200, 25921
2012-04-14 23:44:48 +0200, 25988
2012-04-19 19:03:10 +0200, 26015
➜ heim.github.com (master) ✗ 4m#

# output

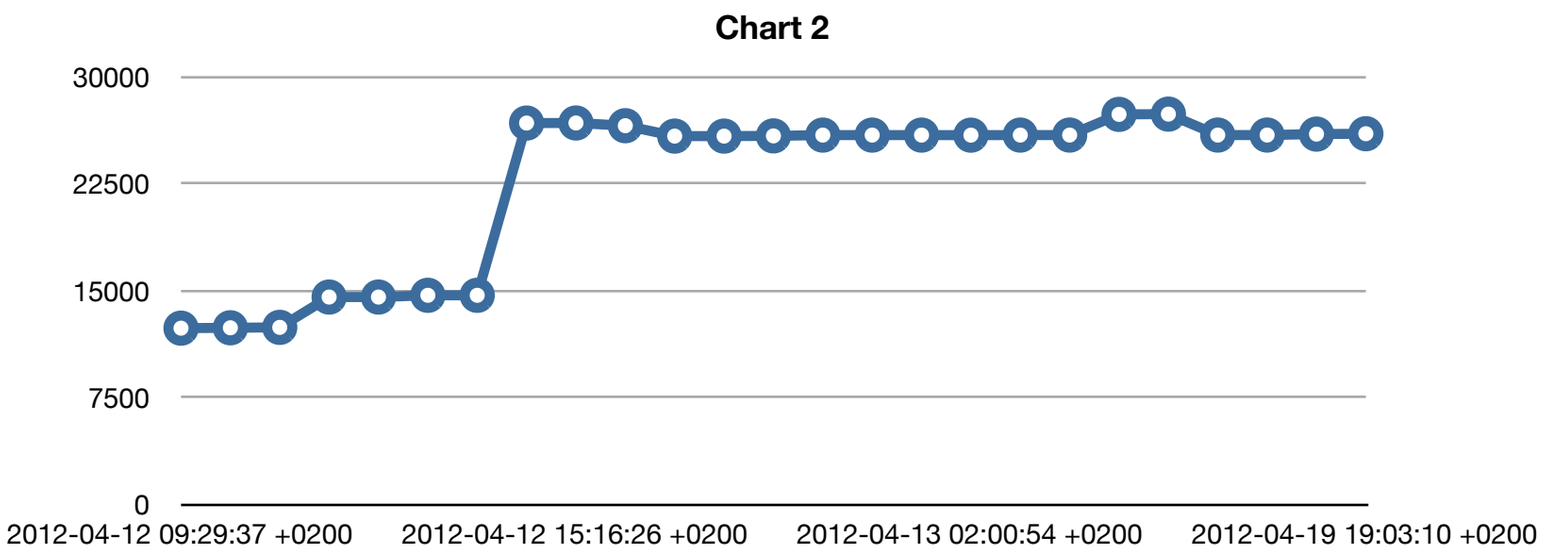


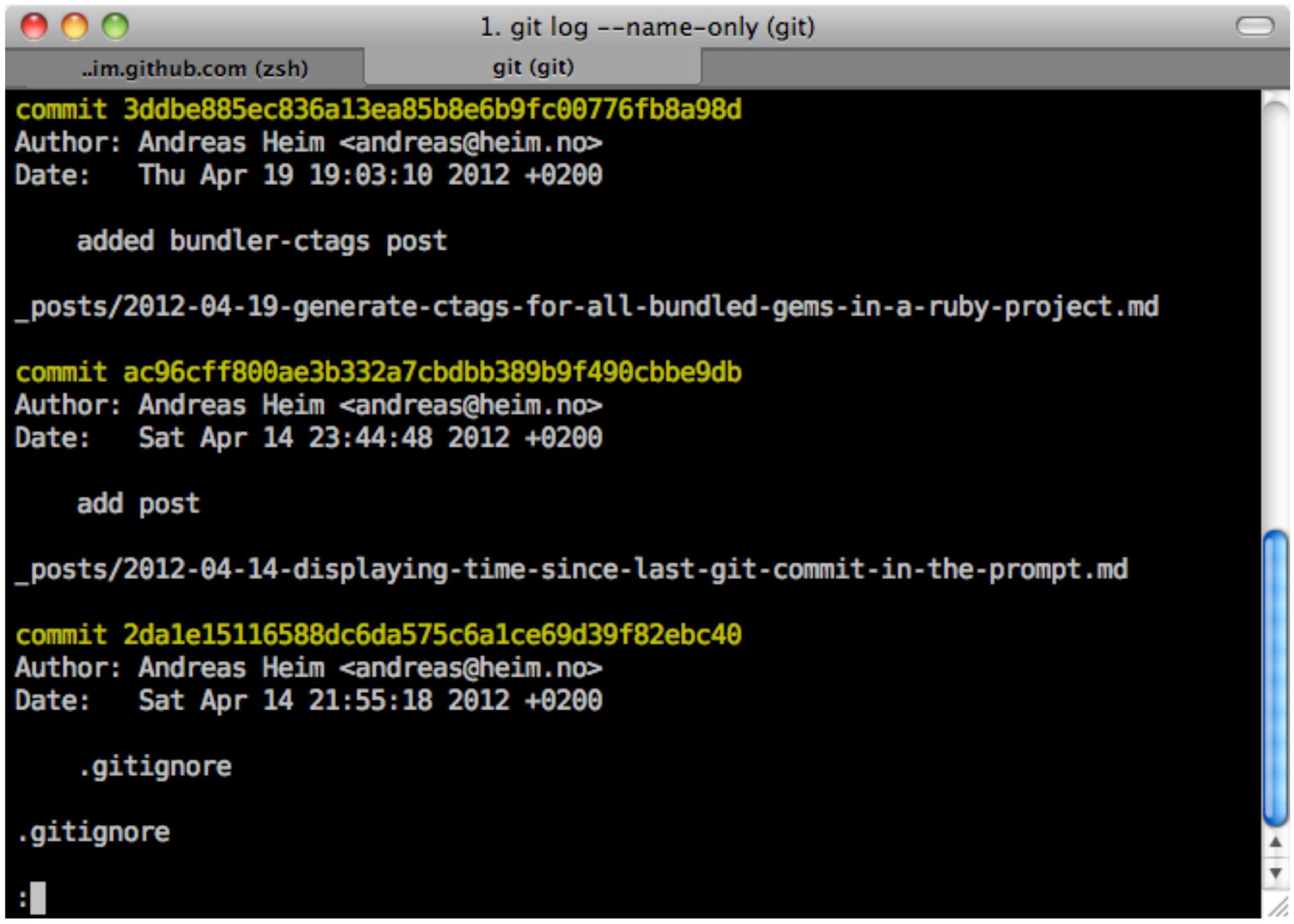
Chart 2
30000
22500
15000
7500
0
2012-04-12 09:29:37 +0200
2012-04-12 15:16:26 +0200
2012-04-13 02:00:54 +0200
2012-04-19 19:03:10 +0200

# #2 churn

hvor mange ganger en fil har endret seg

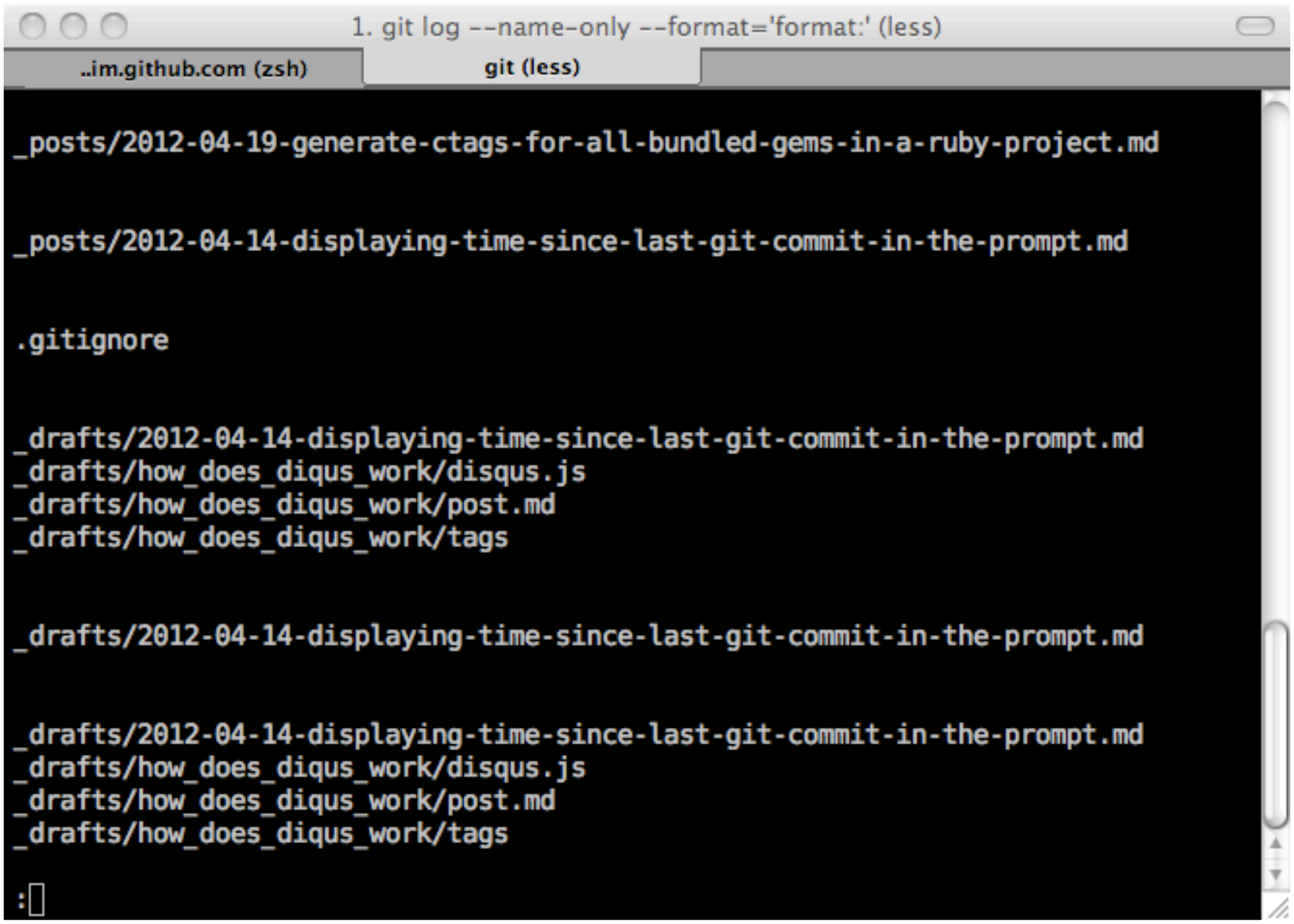
liste filer

git log --name-only



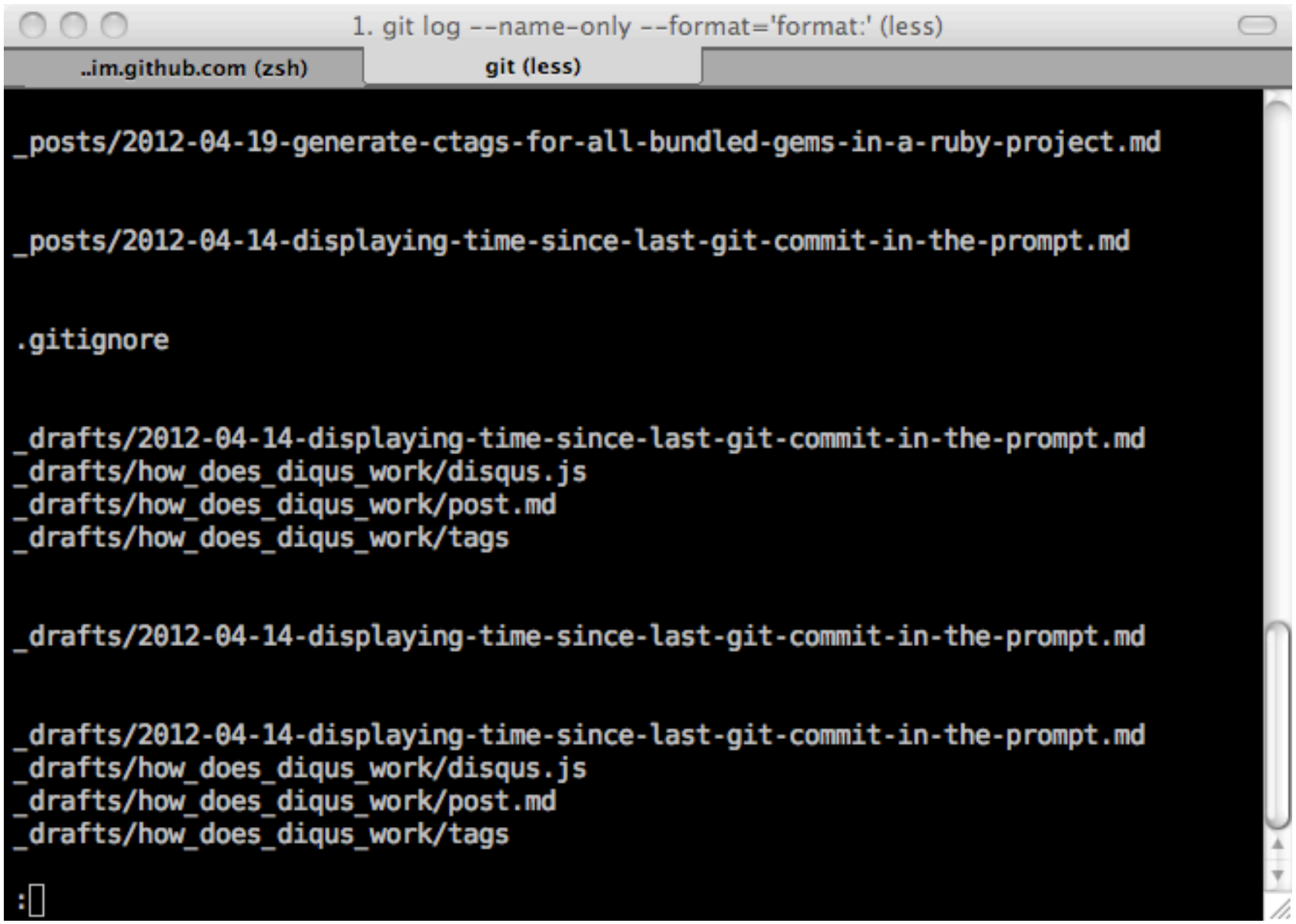
# liste filer pt 2

## git log --name-only --format='format:'



# liste filer pt 3

## git log --name-only -M -C --format='format:'




-M = renames

-C = copies

# liste filer pt 4, fjerne whitespace

git log --name-only -M -C --format='format:' |
grep -v '^$'

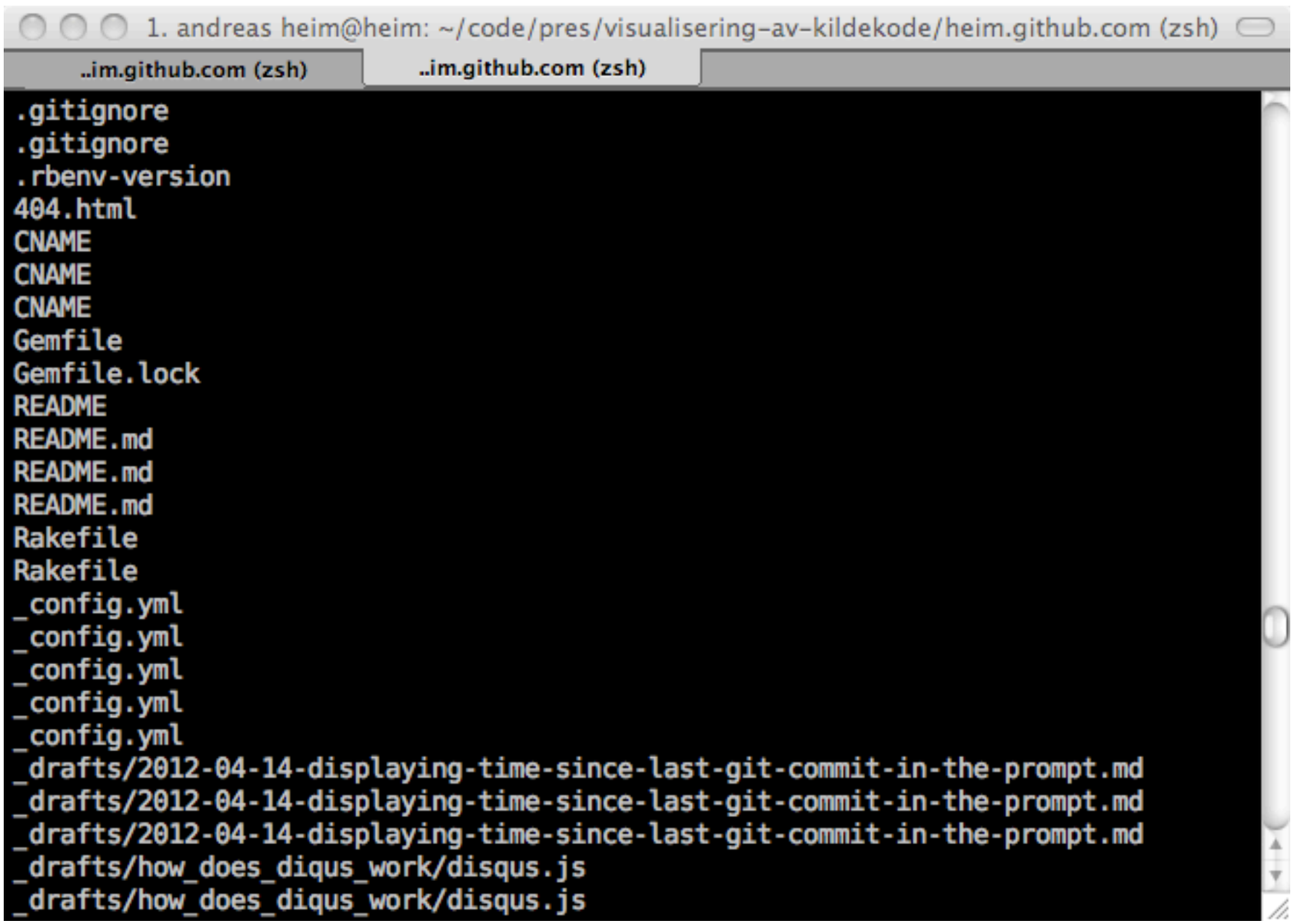
1. andreas heim@heim: ~/code/pres/visualisering-av-kildekode/heim.github.com (zsh)

..im.github.com (zsh) ..im.github.com (zsh)

```
_posts/2012-04-19-generate-ctags-for-all-bundled-gems-in-a-ruby-project.md
_posts/2012-04-14-displaying-time-since-last-git-commit-in-the-prompt.md
.gitignore
_drafts/2012-04-14-displaying-time-since-last-git-commit-in-the-prompt.md
_drafts/how_does_diqus_work/disqus.js
_drafts/how_does_diqus_work/post.md
_drafts/how_does_diqus_work/tags
_drafts/2012-04-14-displaying-time-since-last-git-commit-in-the-prompt.md
_drafts/2012-04-14-displaying-time-since-last-git-commit-in-the-prompt.md
_drafts/how_does_diqus_work/disqus.js
_drafts/how_does_diqus_work/post.md
_drafts/how_does_diqus_work/tags
Rakefile
_includes/themes/heim/default.html
_config.yml
CNAME
talks.html
_posts/2012-04-13-getting-started-with-vim-and-ctags.md
_posts/2012-04-12-some-small-vim-tips.md
assets/themes/heim/css/screen.css
_layouts/default.html
_layouts/page.html
assets/themes/heim/css/screen.css
assets/themes/heim/css/syntax.css
assets/themes/heim/images/rss.png
```

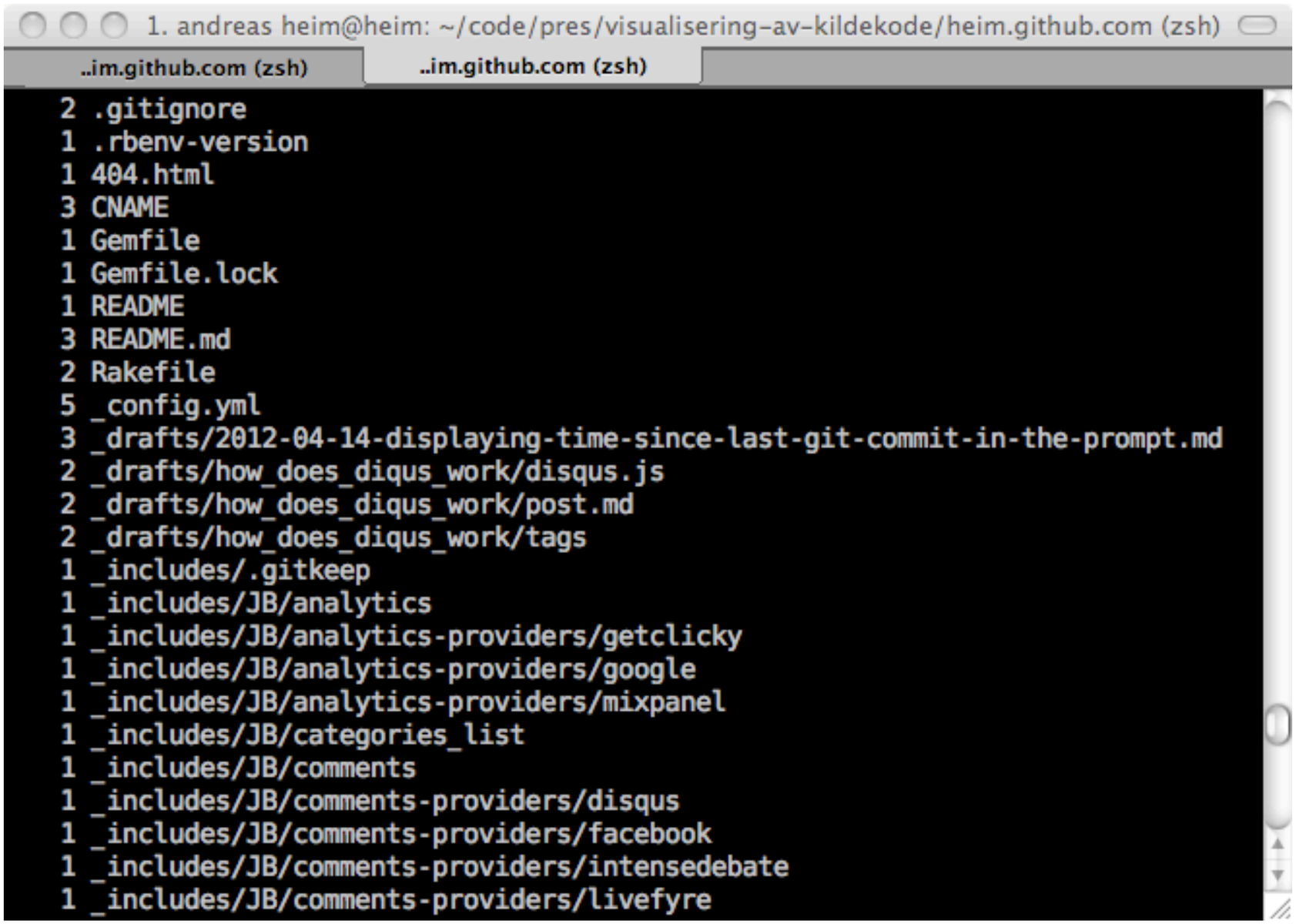
# Telle filer pt I

git log --name-only -M -C --format='format:' | grep -v '^$' | sort



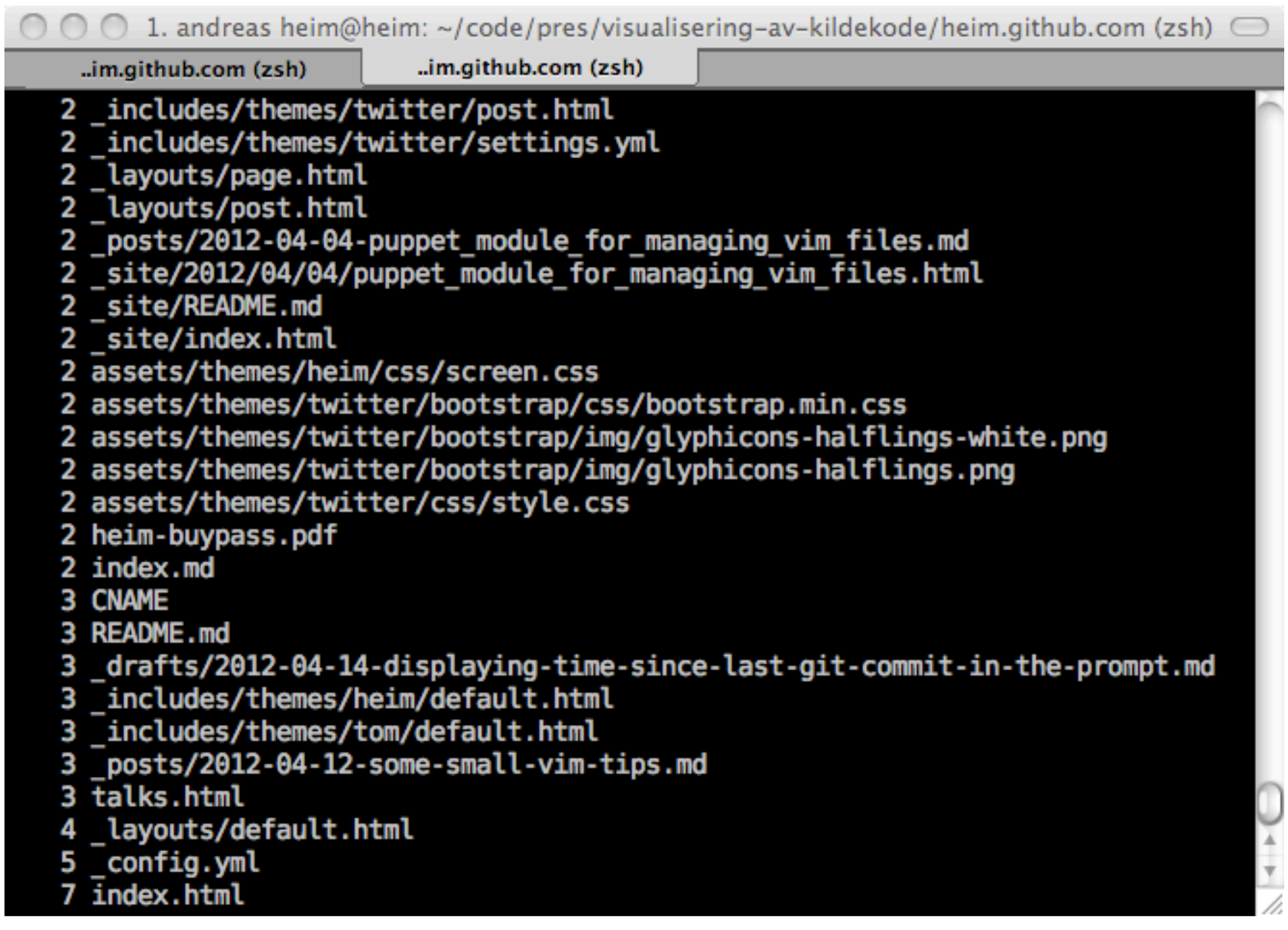
# Telle filer pt 2

git log --name-only -M -C --format='format:' | grep -v '^$' | sort | **uniq -c**



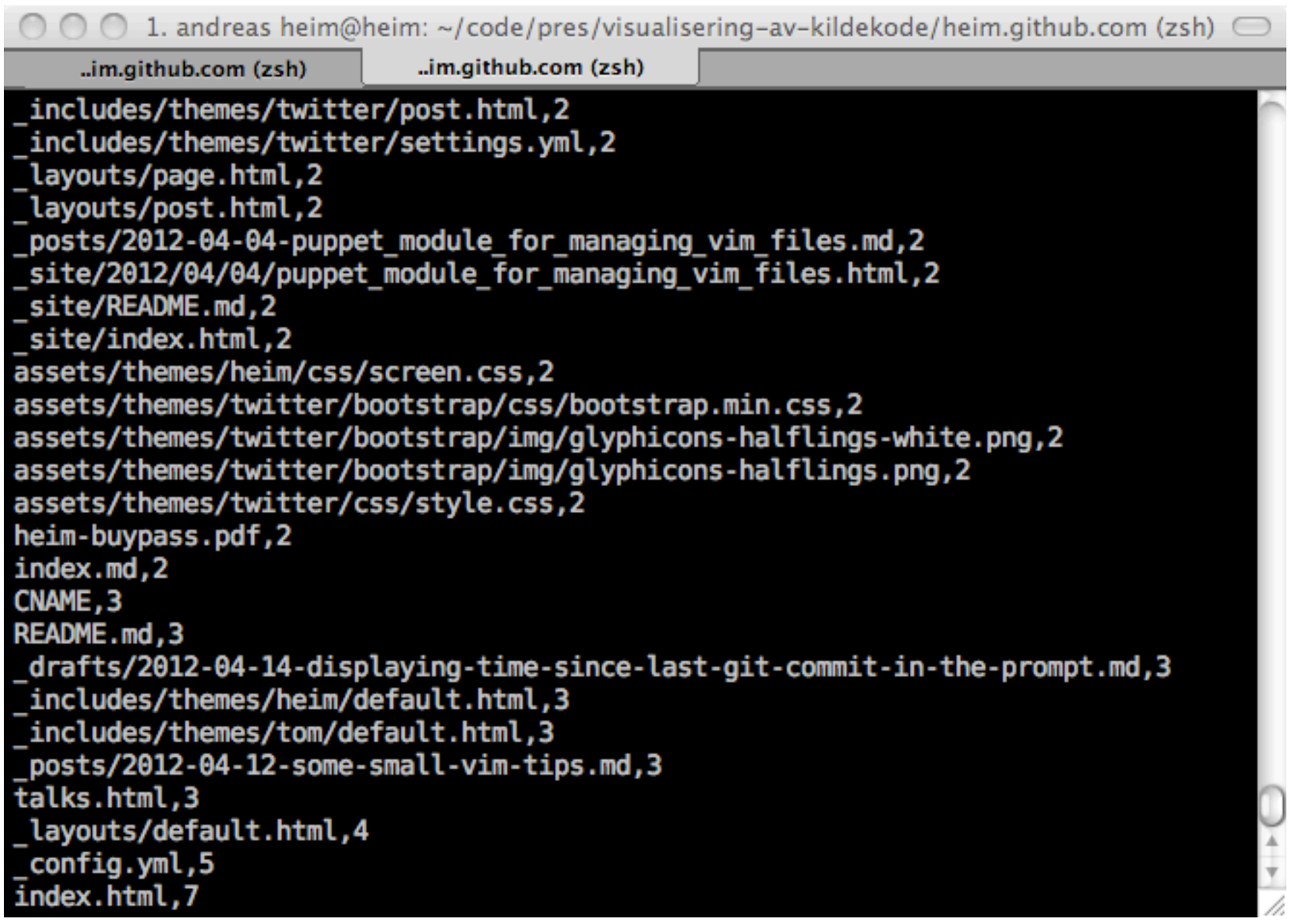
# Telle filer pt 3

git log --name-only -M -C --format='format:' |
grep -v '^$' | sort | uniq -c | **sort**

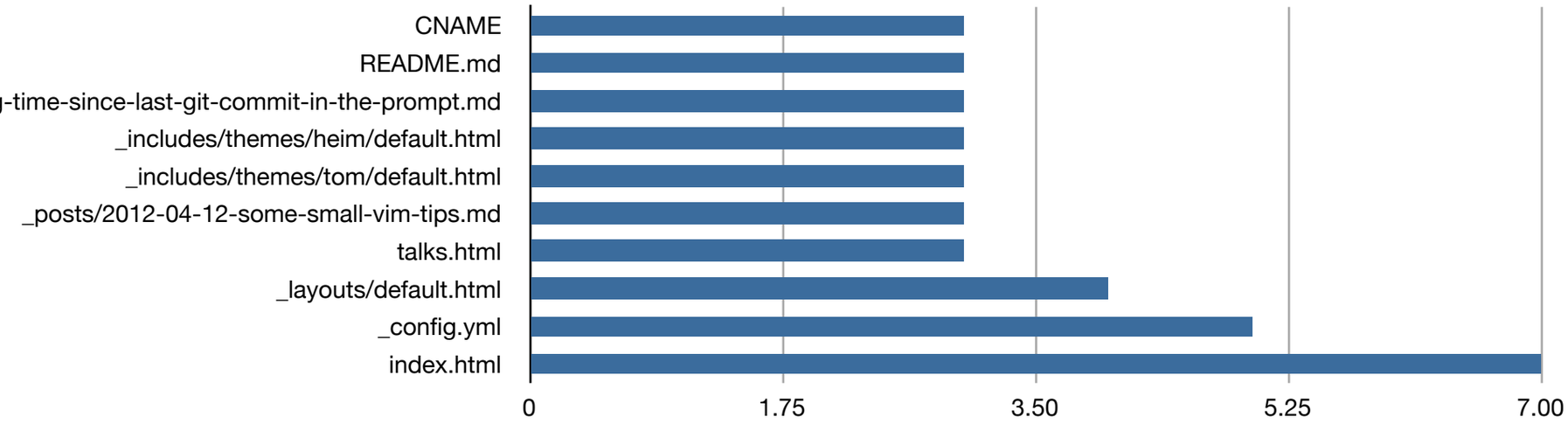


awk <3

```
git log --name-only -M -C --format='format:' |
grep -v '^$' | sort | uniq -c | sort |
awk '{print $2 "," $1}'
```



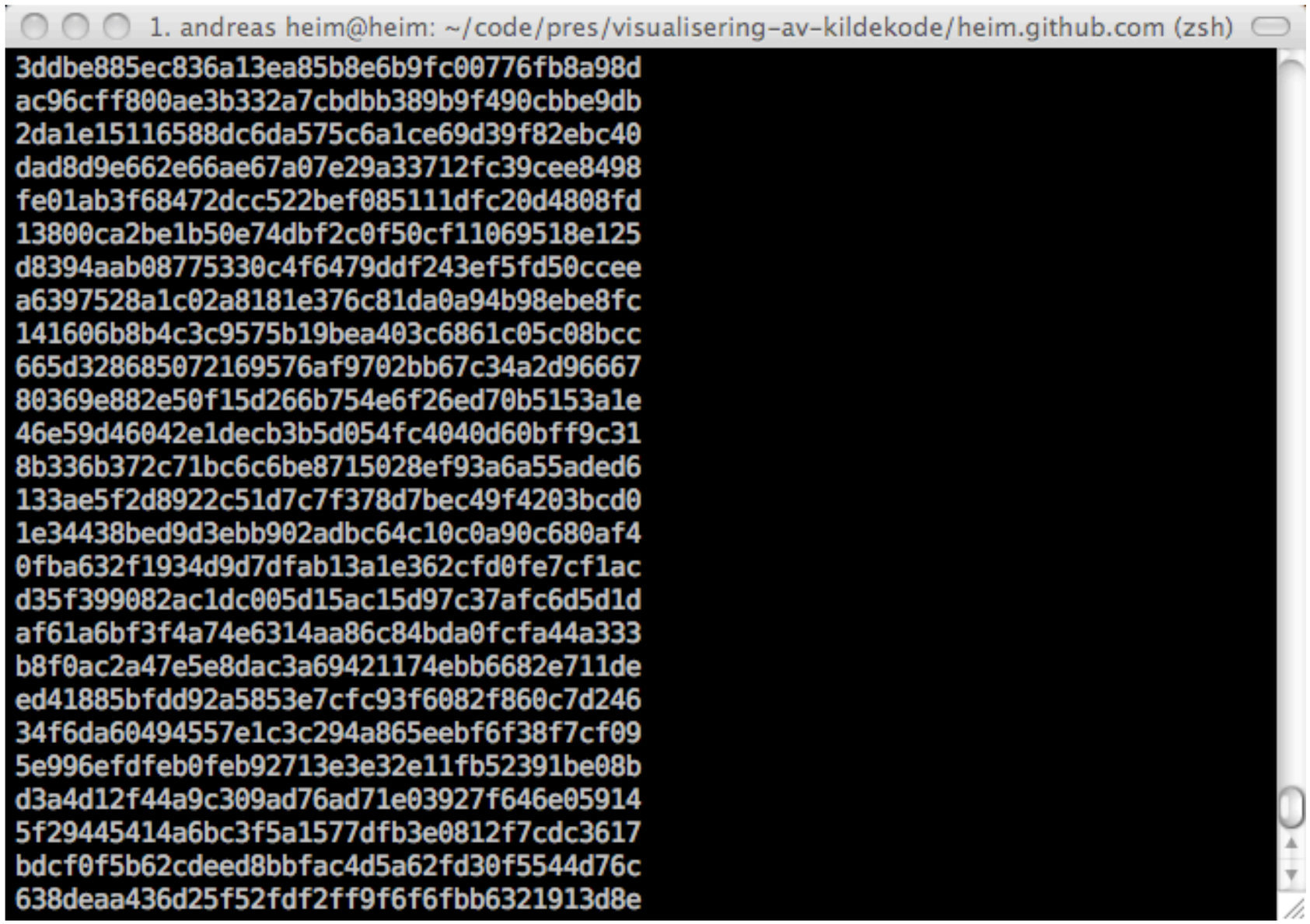
# output


CNAME
README.md
_drafts/2012-04-14-displaying-time-since-last-git-commit-in-the-prompt.md
_includes/themes/heim/default.html
_includes/themes/tom/default.html
_posts/2012-04-12-some-small-vim-tips.md
talks.html
_layouts/default.html
_config.yml
index.html
0
1.75
3.50
5.25
7.00

impact - antall kodelinjer endret pr commit

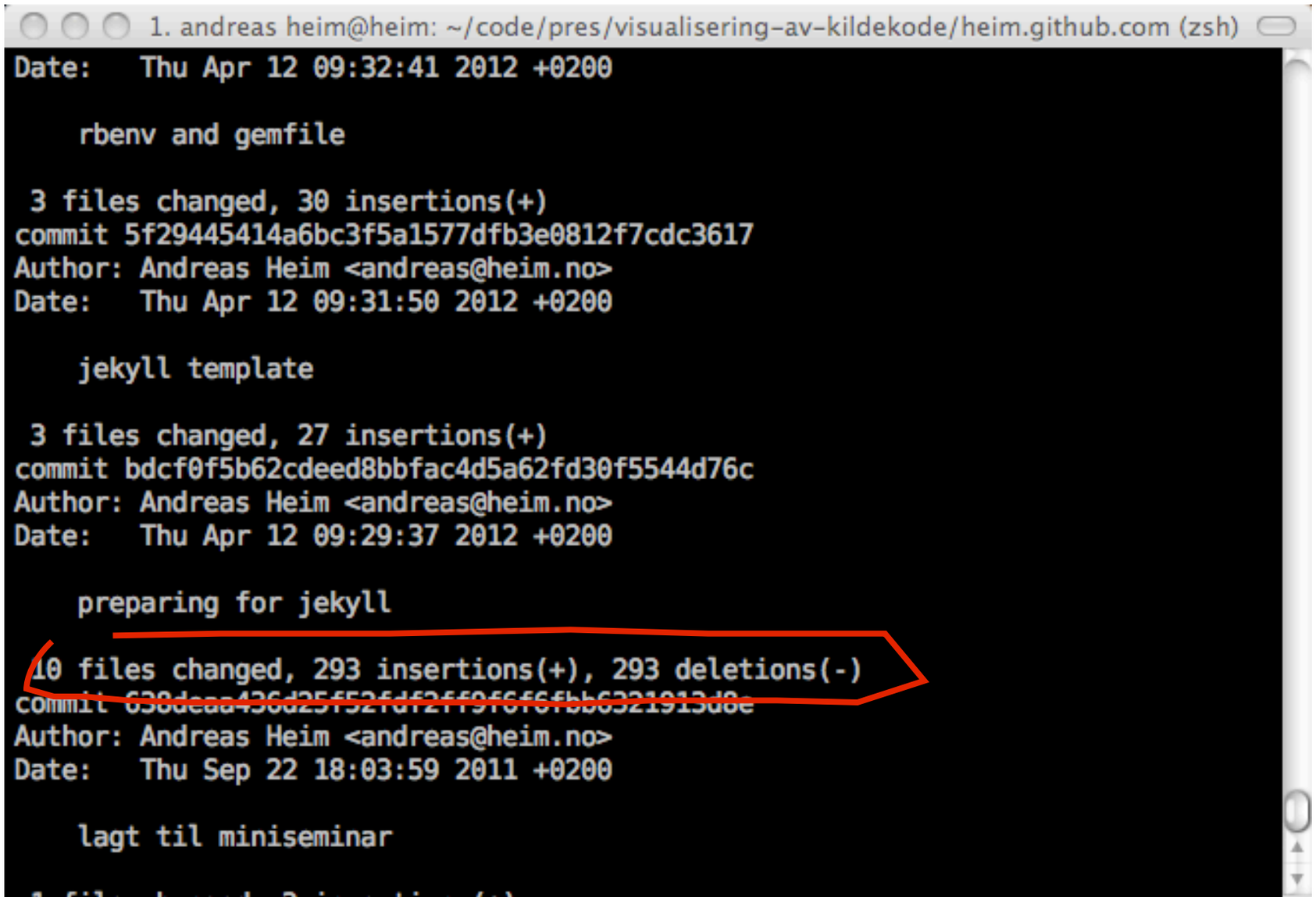
finne revisjonene

```
git rev-list HEAD --since="1 year ago"
```



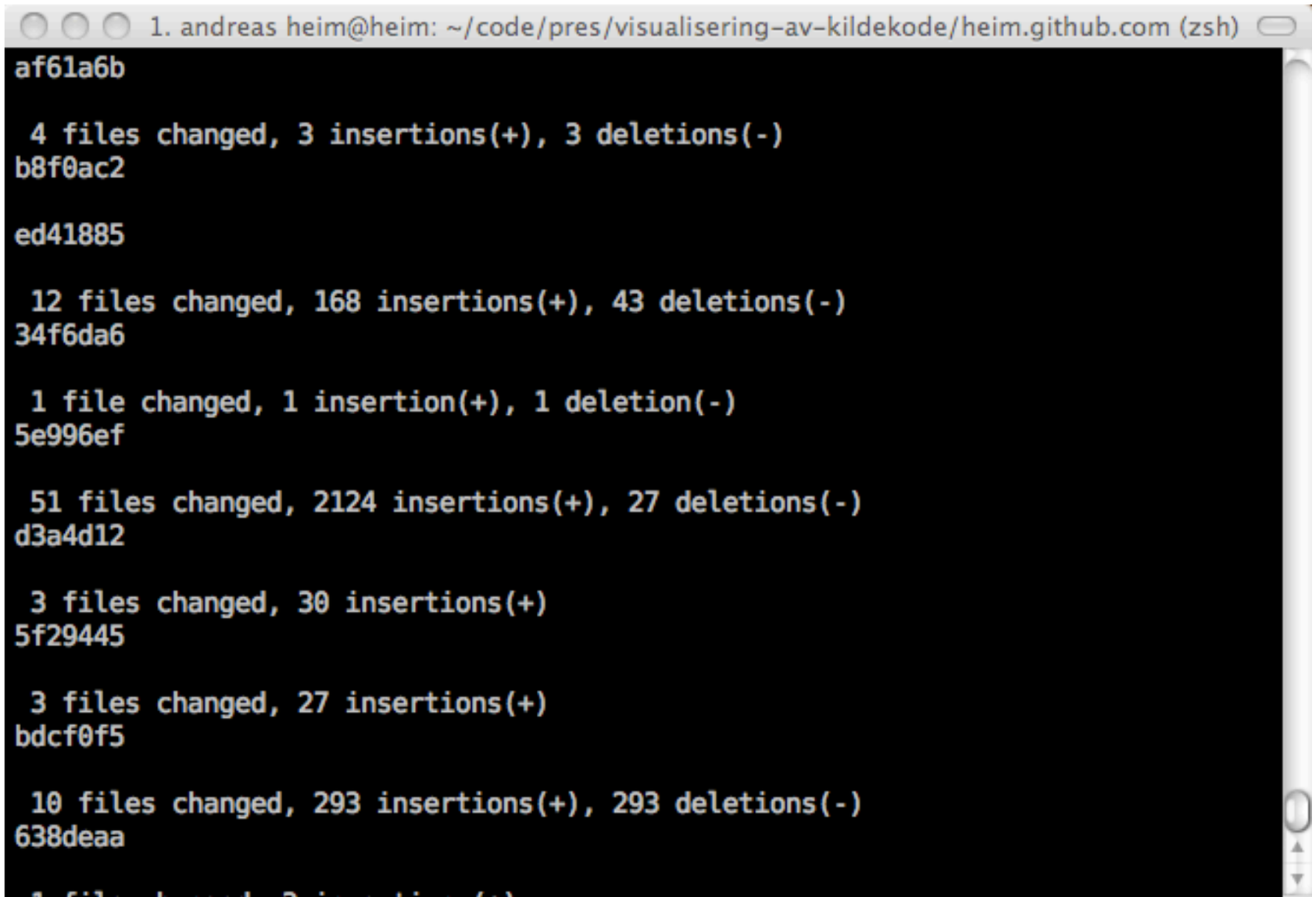
vise shortstat

```
git rev-list HEAD --since="1 year ago" |
while read rev; do; git show $rev --shortstat |
cat; done
```



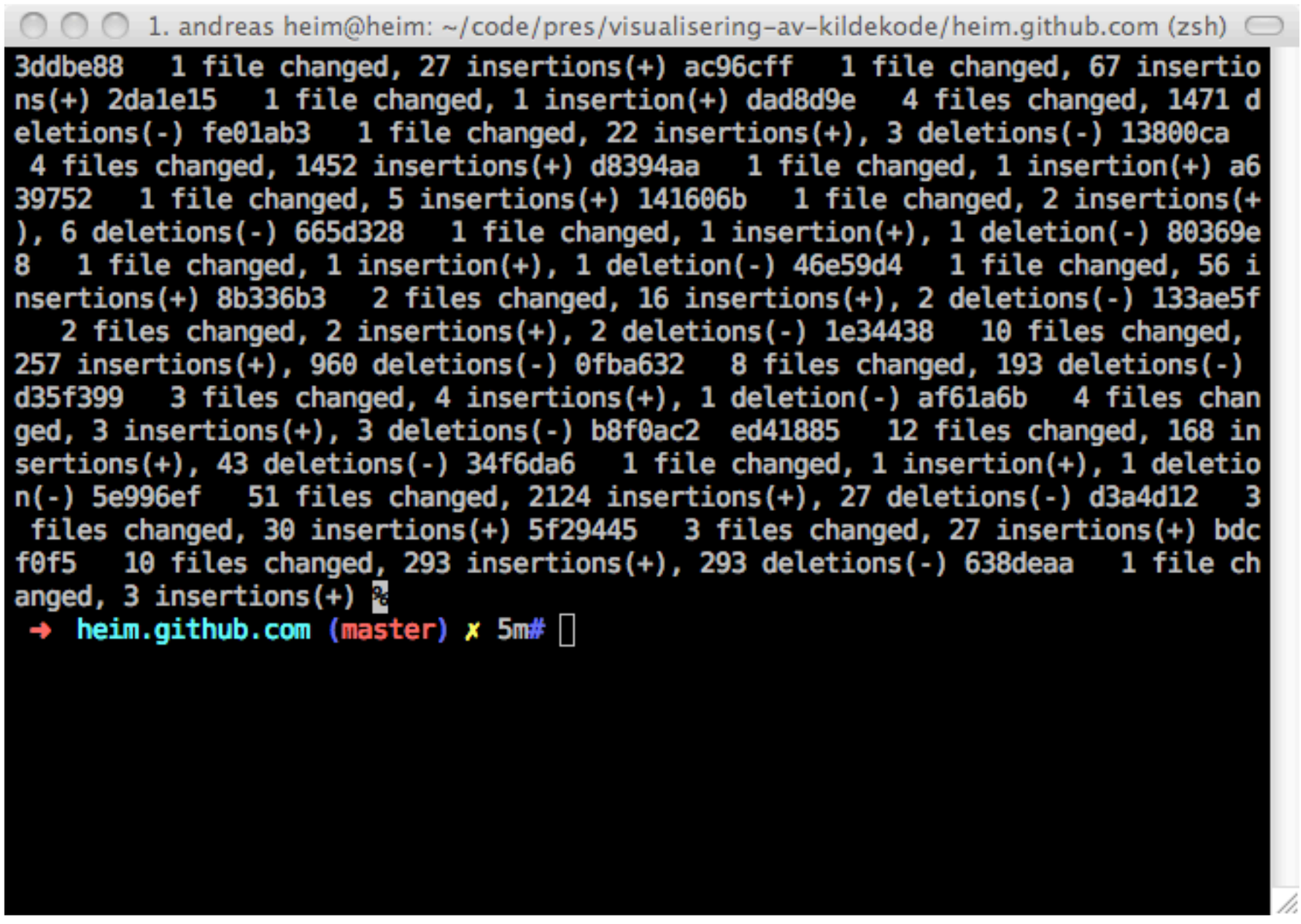
# fjerne unødig info

```
git rev-list HEAD --since="1 year ago" |
while read rev; do; git show $rev
--shortstat --format='%h' | cat; done
```



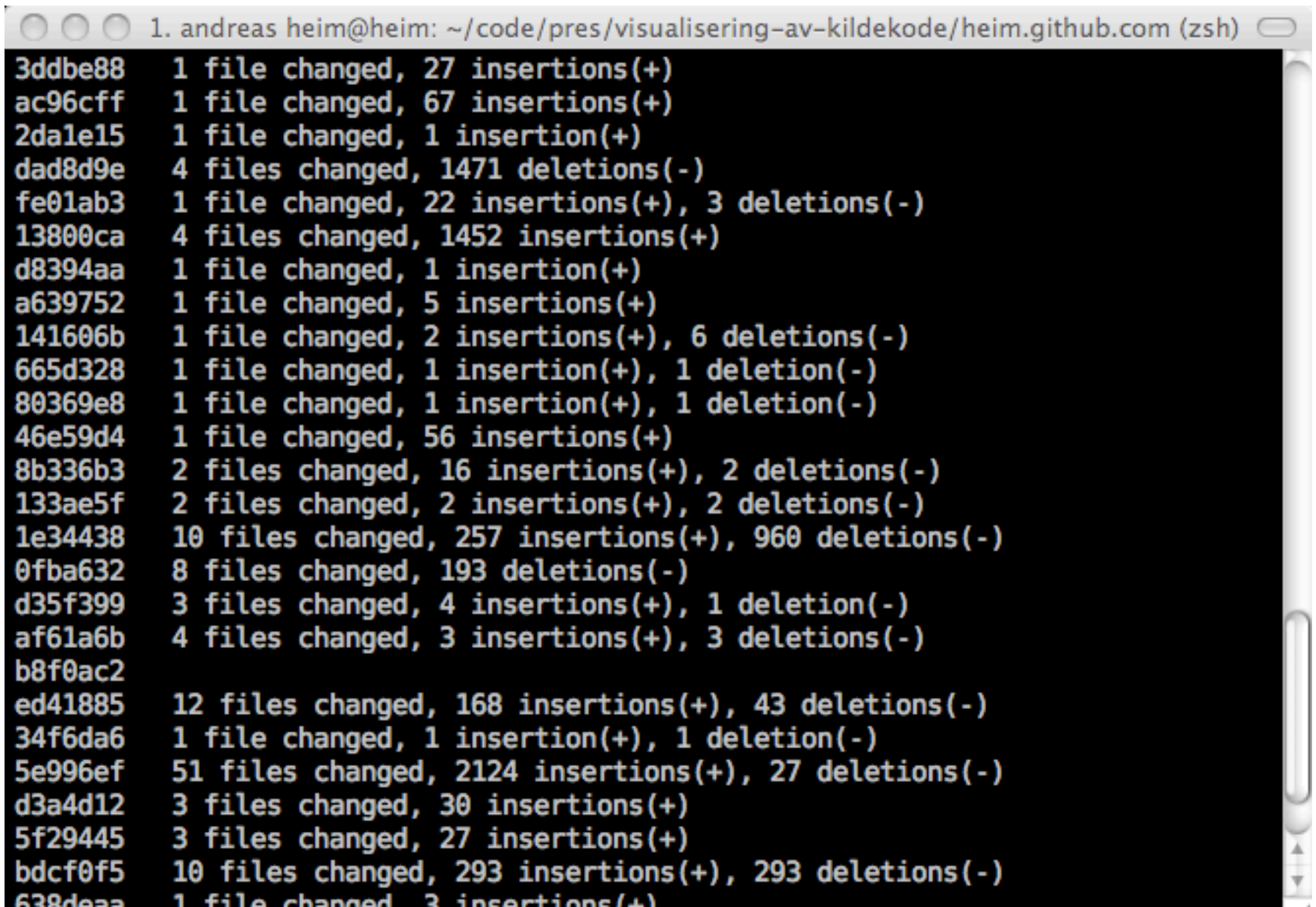
fjerne linjeskift og blanke linjer

```
git rev-list HEAD --since="1 year ago" |
while read rev; do; git show $rev --shortstat --format="%h"
| tr "\\n" " "; done
```



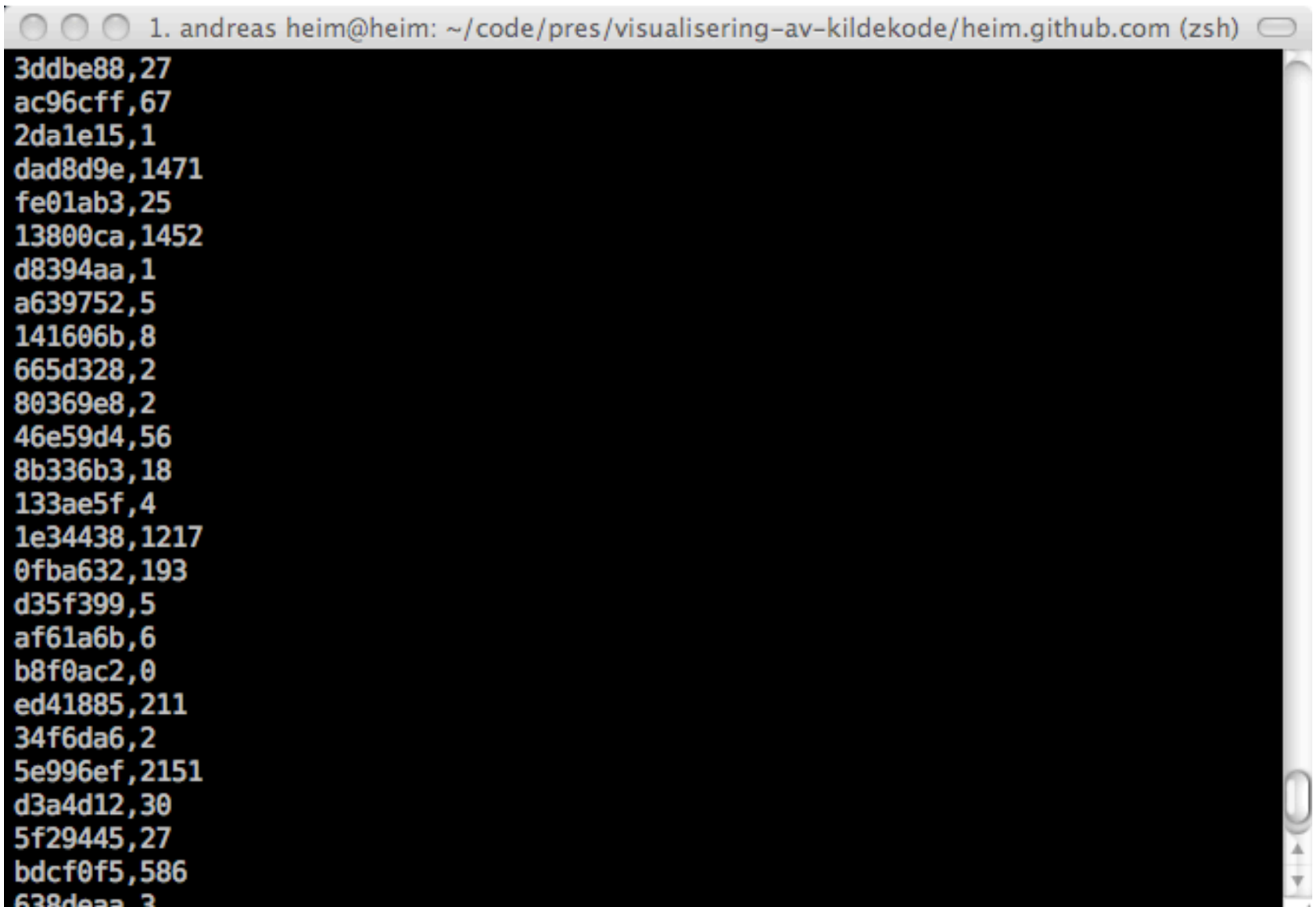
## få ut info på en og en linje

```
git rev-list HEAD --since="1 year ago" | while read rev; do;
git show $rev --shortstat --format="%h" | tr "\\n" " " |
awk '{print}'; done
```

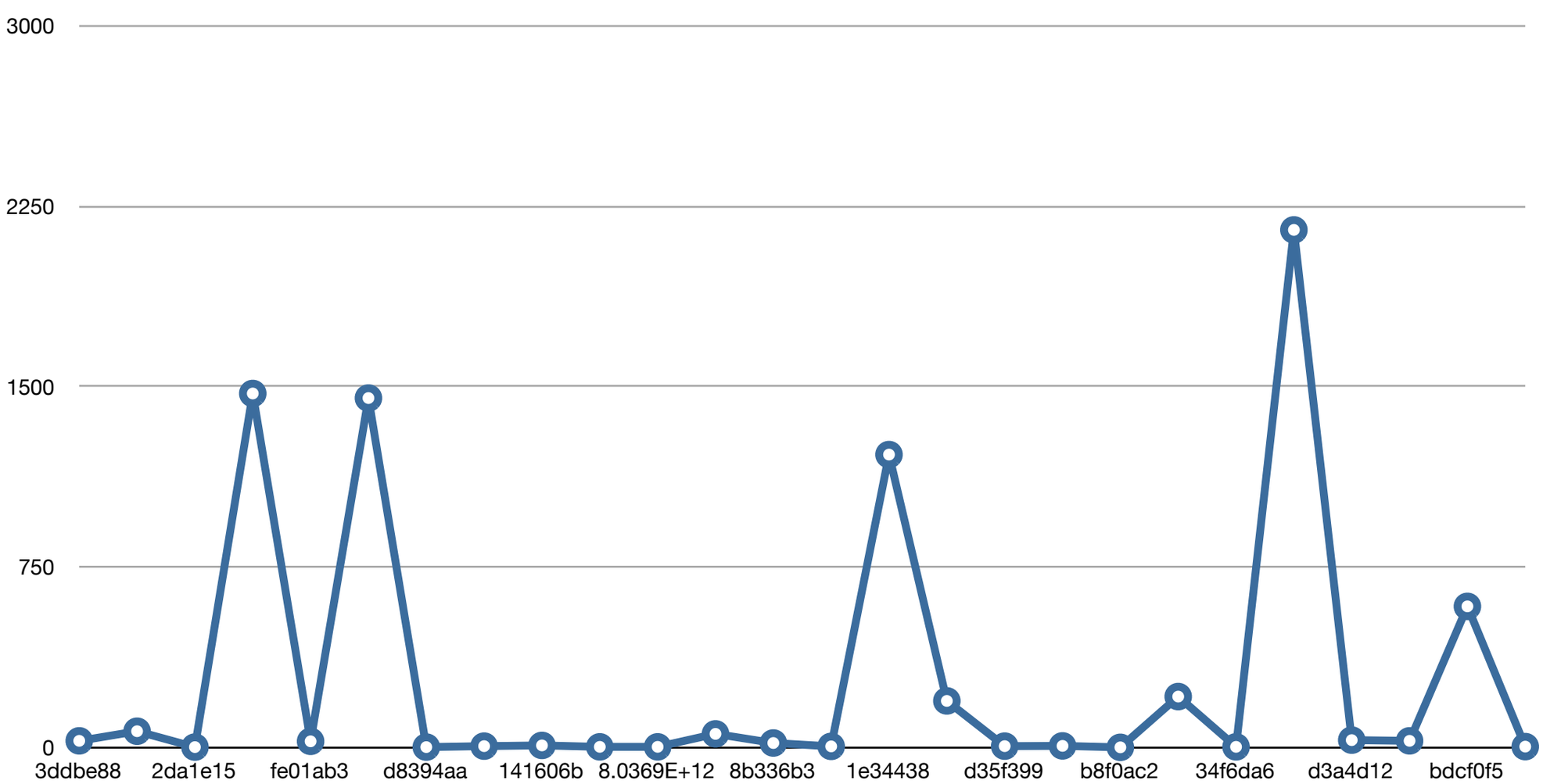


## plukke ut info og formattere

```
git rev-list HEAD --since="1 year ago" | while read rev; do;
git show $rev --shortstat --format="%h" | tr "\\n" " " |
awk '{t=$5+$7} {print $1 "," t}'; done
```



# resultat


3000
2250
1500
750
0
3ddbe88
2da1e15
fe01ab3
d8394aa
141606b
8.0369E+12
8b336b3
1e34438
d35f399
b8f0ac2
34f6da6
d3a4d12
bdcf0f5

twitter: @heim
github.com/heim
heim.no