

plug_static_ls: directory listing module for Plug/Phoenix

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Erlang and Elixir Factory SF Bay 2017 ErLounge Lightning Talk

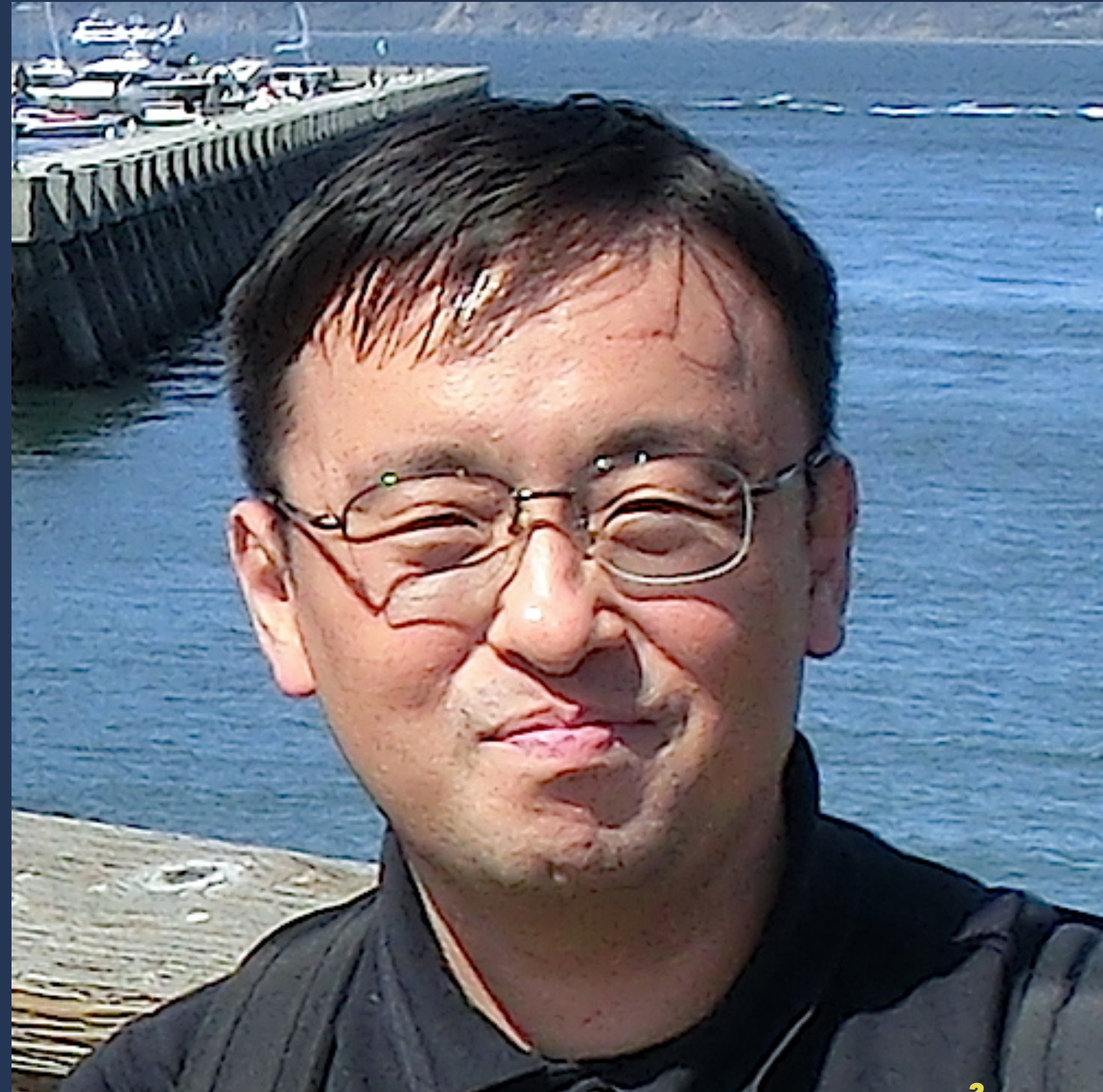
Hello!

Erlang/OTP since 2008

Elixir since 2015

Pepabo Labs

Web dev/op/research



Directory Listing?

Yaws example ->

Providing directory listing of static assets/files

This is easy on Apache, Nginx, and Yaws, but - Phoenix or Plug doesn't have this module

Index of /data/latest-per-pkg/

Name	Last Modified	Size	Description
 Parent Directory		-	
 autoconf	08-Dec-2016 10:02	1k	
 autoconf-wrapper	08-Dec-2016 10:02	1k	
 automake	08-Dec-2016 10:02	1k	
 automake-wrapper	08-Dec-2016 10:02	1k	
 bash	07-Dec-2016 08:08	1k	
 bison	23-Dec-2016 22:42	1k	
 ccache	07-Dec-2016 07:58	1k	
 elixir	08-Dec-2016 01:36	1k	
 erlang	06-Jan-2017 13:42	1k	
 git-lfs	31-Dec-2016 22:31	1k	
 gmake	07-Dec-2016 08:38	1k	
 go	28-Dec-2016 11:04	1k	
 go-git-lfs	31-Dec-2016 10:26	1k	
 go14	07-Dec-2016 07:58	1k	
 help2man	21-Dec-2016 16:20	1k	

A new Plug module plan

Phoenix uses **Plug.Static** for the static contents

- Map a URI path to a directory (with access control)
- If the specified file is found it is sent with MIME type
- If the file is not found, control is transferred to next Plug ->

Adding a module listing the directory looks promising

Any similar modules?
... Not found

**If you don't find a module
Build it by yourself**

Writing from scratch is hard

If you find a directory, following tasks are needed:

- Get directory listing (with an arbitrary sort function)
- Pick up the sort algorithm identifier from GET query parameter
- Get file attributes and show them
- Keep the chosen sort algorithm in the URL

Result: plug_static_ls

- Module name: **PlugStaticLs**
- Configure the endpoint like this:

```
plug Plug.Static, at: "/static",  
  from: "/files", gzip: false,  
  only: ~w(images public js css)  
plug PlugStaticLs, at: "/static",  
  from: "/files"  
  only: ~w(images public)  
# Error handling required for the fall-through URIs
```


plug_static_ls screen

Consuming considerable CPU time

(5ms to 500ms) - not suitable for the public use

Icons files can be shown as Base64 img binaries, but dropped from the module release kit to prevent duplicated images

The screen looks like Yaws, anyway

Index of /.kerl

	<u>Name</u>	<u>Last Modified</u>	<u>Size</u>
[..]	<u>Parent Directory</u>		
[Dir]	<u>archives/</u>	2016-06-22 21:03:07	
[Dir]	<u>builds/</u>	2016-12-15 12:46:25	
[Dir]	<u>gits/</u>	2016-08-11 20:26:22	
[File]	<u>otp_builds</u>	2016-12-15 12:46:25	9
[File]	<u>otp_builds-e</u>	2016-12-15 12:43:45	20
[File]	<u>otp_installations</u>	2016-12-15 12:44:54	58
[File]	<u>otp_installations-e</u>	2016-11-10 21:22:54	84
[File]	<u>otp_releases</u>	2016-12-15 12:34:03	479

plug_static_ls at localhost

plug_static_ls

https://hex.pm/packages/plug_static_ls

https://github.com/jj1bdx/plug_static_ls

Thank you