

Opening The Black Box

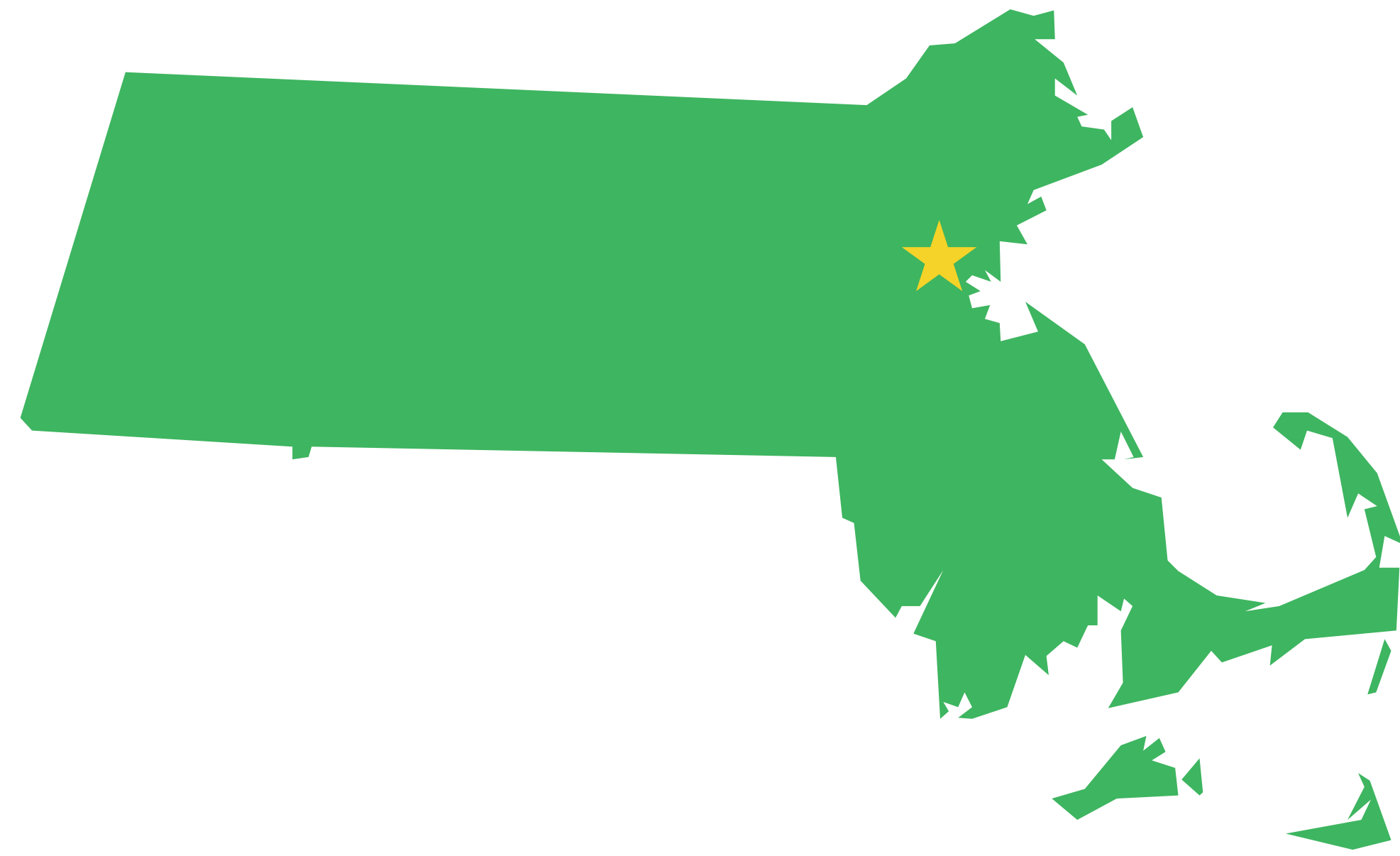
BADCamp 10/23/15



Howdy!
I'm an engineer at
Four Kitchens

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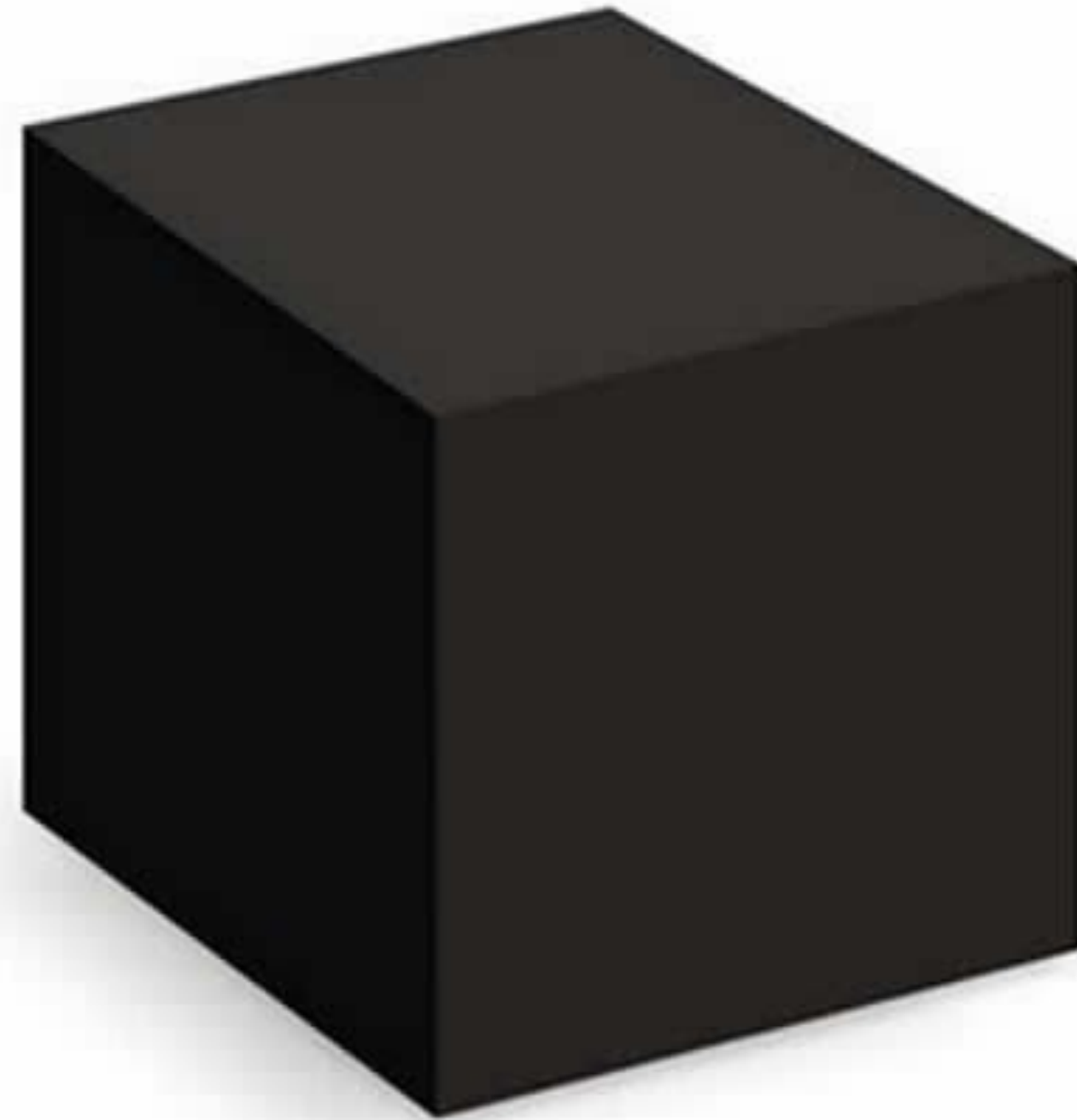


What Is The Black Box?

A Familiar Story?

- Non-technical education
- Self taught web skills
- Above average Googling abilities
- Late nights staring at error messages

Mental Model of Drupal



Mental Model of Drupal



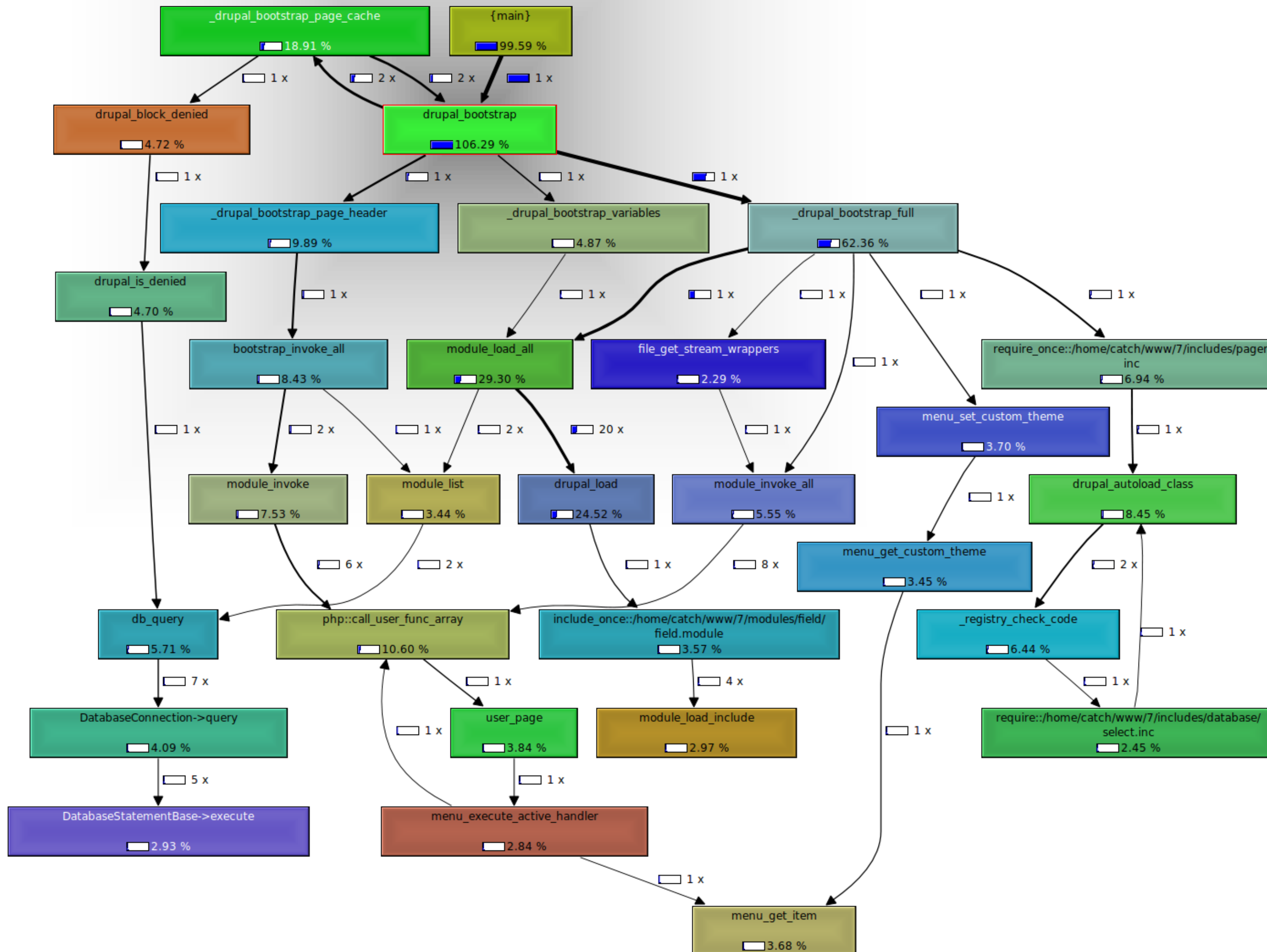
Mental Model of Drupal



Mental Model of Drupal



Mental Model of Drupal



Start At The Beginning

Text Editors

- “Text Editors”
- Text Editors
- IDEs

“Text Editors”

- Text Edit (Mac)
- Notepad (Windows)
- Nano (Linux / Mac)

Text Editors

- Notepad++ (Windows)
- vim (Mac / Linux)
- Dreamweaver (Mac / Windows)
- Sublime Text (Mac / Linux / Windows)
- Atom (Mac / Linux / Windows)

Integrated Development Environments

- PHPStorm (Mac / Linux / Windows)
- Eclipse (Mac / Linux / Windows)
- Komodo (Mac / Linux / Windows)

Development Environments

- On your server
- On your machine
- On your machine, but it acts like the server

Development Environments

- FTP Development
 - “Cowboy coding”
- Local Environments
 - MAMP / LAMP / Vagrant
- Next generation
 - Kalabox

FTP Development

- FTP Development
 - “Cowboy coding”
 - No version control up front
 - Little debugging visibility
 - Log files (maybe), debug statements
 - Watchdog logs (maybe)

Debug Statements in Code

- `print_r()`
 - Raw dump of a variable or context, no formatting
- `print_r($node);`
 - `<pre><?php print_r($node); ?></pre>`
- `dsm()`
 - Formatted dump of a variable or context
- `dsm($node);`

Local Development

- MAMP / Dev Desktop / Native LAMP
 - Code runs entirely locally
 - Added bonus of offline work, no internet required
- `print_r()`, `dsm()`, but also more
- `xdebug`

Local Development: The Next Generation

- Kalabox with Pantheon / Acquia integration
- Custom Vagrant boxes
- `print_r()`, `dsm()`, `xdebug`
- Very accurate performance profiling
- XHProf

Something Is Broken!



Relax.

Remember Cobble's Knot



What's Broken?

- Is something not showing up?
 - New content - is it published?
 - Old content - are permissions set properly?
- Is something showing up that shouldn't?
 - Raw HTML and Javascript in a WYSIWYG field?

Work From The Bottom Up

- Log Files
 - You should learn how to find your log files before you need your log files
- multital
 - Linux / Mac utility to easily view logs with more options than tail

Where Is It Broken?

- Custom Module
- Theme `template.php`
- Theme Template



The Scientific Method

Finally, Debugging

- Change ***one*** thing at a time
- Test that change
- Repeat

git Is Your Friend

- Save your progress as you work
 - Recreate your Features
- Makes rabbit holes manageable

git diff Is Your Friend

- Remove your debug statements
- Ensure you only changed as much as you needed to change
- You only commit `dsm('Butts');` to master **once**

git blame Is Your Friend

- Can help you track down who wrote the offending code
 - This ***should not*** be a witch hunt
 - This ***should*** be a chance to find context for the issue

Make The Future Easier

Proactive Debugging

- watchdog() (D7)
- \Drupal::logger() (D8)
- syslog Module
 - <http://loggly.com>
- Write a test!



We're Hiring!



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Thank you!



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