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Modernize WordPress

for a multi-developer, multi-environment workflow

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WordPress and Me

- Since Version 1.5 2005? *(wow…)*
- Freelance business & nonprofits

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WordPress and Me

- Blog posts = profit
- Higher Ed since 2012

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WordPress and You

- Who benefits from this session?
  - Starting a new WordPress project: best practices
  - Restructuring an existing WordPress project
- What do you gain?
  - Source Control Management with versioning and releases
  - Multi-Developer, Multi-Environment workflow
  - Software package management
  - Dependable deployments

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WordPress and Higher Ed Communicators

- SEO-friendly
  - Featured Images
  - SEO prompts and Excerpts
- Intuitive news writing experience
  - Text, Image and Gallery blocks
- No-code design components

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WordPress and Higher Ed Devs

- Low point of entry for IT/Devs
  - “Famous 5-minute Setup”
  - Massive ecosystem of themes and plugins
- High probability of mistakes
  - Any account with admin role can activate and configure plugins and themes
  - No project history for custom development
  - No version history for dependencies

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WordPress and You

- What will you get from this session?
  - NOT
    - the very best practices
  - Homegrown project, Open Source
    - mostly free *(as in beer)*
  - Example of a simple WordPress site or network
    - deployment to on-premises LAMP or LEMP

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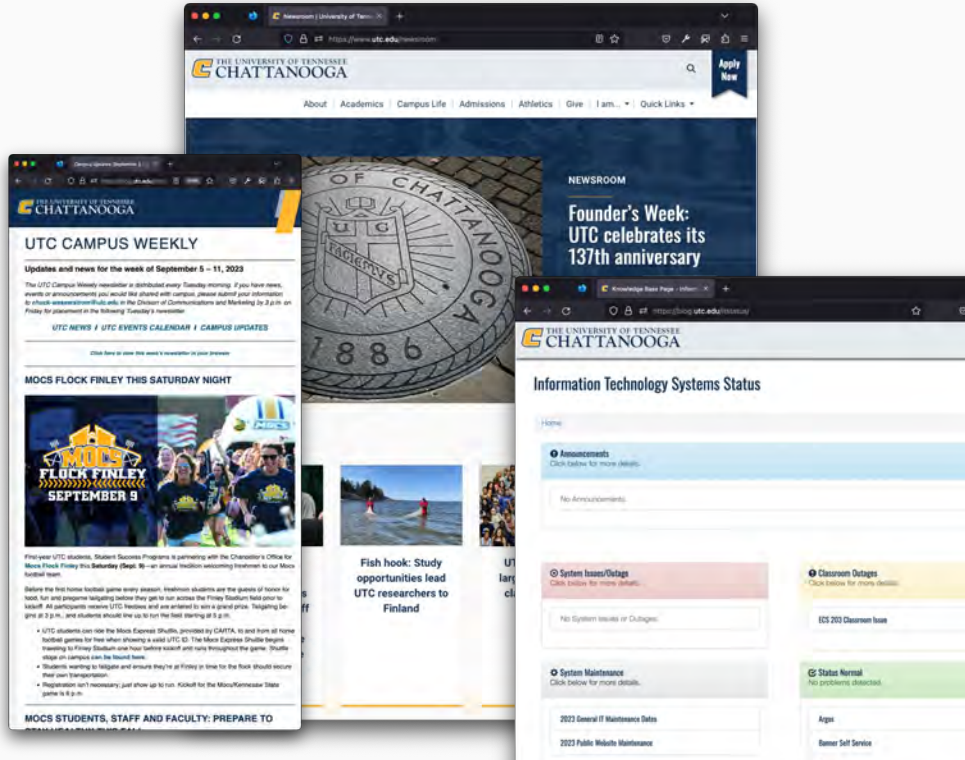
WordPress @UTChattanooga

- News stories and features
  - utc.edu/newsroom
- Blogs
  - blog.utc.edu/cuip
- Email templates
  - blog.utc.edu/campus-weekly
- IT Systems Status
  - utc.edu/status



Newsroom | University of Tenn

https://utccloud.lndo.site/newsroom

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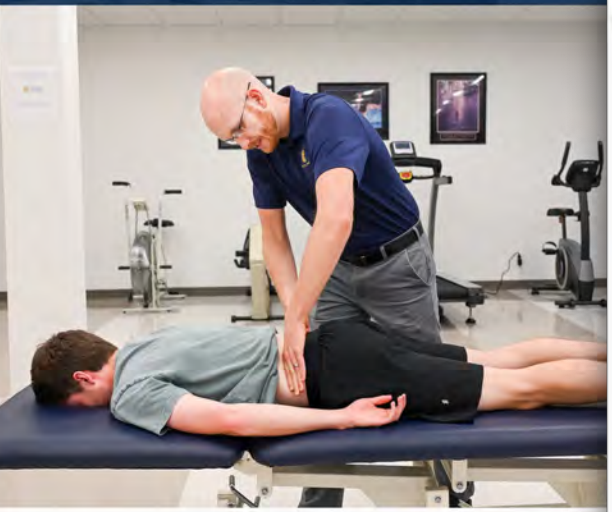

UTC to host workshops and dis

Dashboard ‹ UTC News — WordPress

https://blog.utc.edu/news/2023/09/utc-to-host-workshops-and-discussions-during-national-hazing-prevention

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UTC News

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UTC to host workshops and discussions during National Hazing Prevention Week

Home › Students › UTC to host workshops and discussions during National Hazing Prevention Week

CATEGORIES

Select a category

RECENT POSTS

UTC Theatre Co. to open its season with "Blithe Spirit"

Immigrants' painful journey the subject of documentary to be shown at UTC

Making the cut: UTC grad owns and operates Chattanooga tree service

Students first: "Feeling of community" motivates UTC

September 25, 2023
Shawn Ryan

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WordPress @UTChattanooga

- **Local Development**
  - Lando.dev *or Ddev.com or MAMP or IDE*
- **Source Control**
  - Github.com *or Bitbucket or Gitlab or Git*
- **Software Package Management**
  - Composer + Roots.io / Bedrock
- **Deployment**
  - Laravel Envoy *or Travis or Github Actions*

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```php
<?php
/**
 * Configuration overrides for WP_ENV === 'local'
 */

use Roots\WPConfig\Config;
use function Env\env;
   Gilligan, 1/12/22, 10:31 · UTC8: Add local environment configuration for debugging
Config::define('SAVEQUERIES', true);
Config::define('WP_DEBUG', true);
Config::define('WP_DEBUG_DISPLAY', true);
Config::define('WP_DEBUG_LOG', env( name: 'WP_DEBUG_LOG') ?? tru
Config::define('WP_DISABLE_FATAL_ERROR_HANDLER', true);
Config::define('SCRIPT_DEBUG', true);
Config::define('DISALLOW_INDEXING', true);

ini_set( option: 'display_errors',  value: '1');

// Enable plugin and theme updates and installation from the ad
Config::define('DISALLOW_FILE_MODS', false);

// Enable Jetpack Offline Mode
Config::define( 'JETPACK_DEV_DEBUG', true );

// Enable database repair via wp-admin/maint/repair.php
//Config::define('WP_ALLOW_REPAIR', true);
```

```
# for Lando local environment
DB_NAME='wordpress'
DB_USER='wordpress'
DB_PASSWORD='wordpress'

# Optionally, you can use a data source name (DSN)
# When using a DSN, you can remove the DB_NAME, DB_USER, DB_PASSWORD, and DB_HOST variables
# DATABASE_URL='mysql://database_user:database_password@database_host:database_port/database_na

# Optional database variables
DB_HOST='database'
DB_PREFIX='wp_'

# Multisite variables
DOMAIN_CURRENT_SITE="utcwpblogsmultisite.lndo.site"

# local, localnodebug, development, staging, or production
WP_ENV='local'
WP_HOME="https://${DOMAIN_CURRENT_SITE}"
WP_SITEURL="${WP_HOME}"

# Specify optional debug.log path
WP_DEBUG_LOG='/app/web/app/debug.log'
```

Local Development

- Lando.dev
  - Recipes for many common software apps and services
  - Networked local environment in Docker Desktop
    - App Server
    - Database Server
    - Proxy Server
  - Command Line scripts, SSH key forwarding
  - Utilities: db-export/import, rebuild, wp-cli, ssh, etc.

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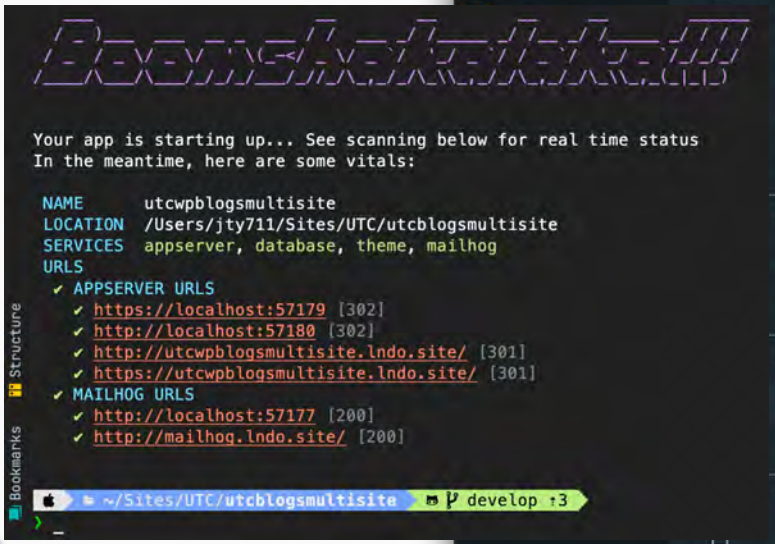

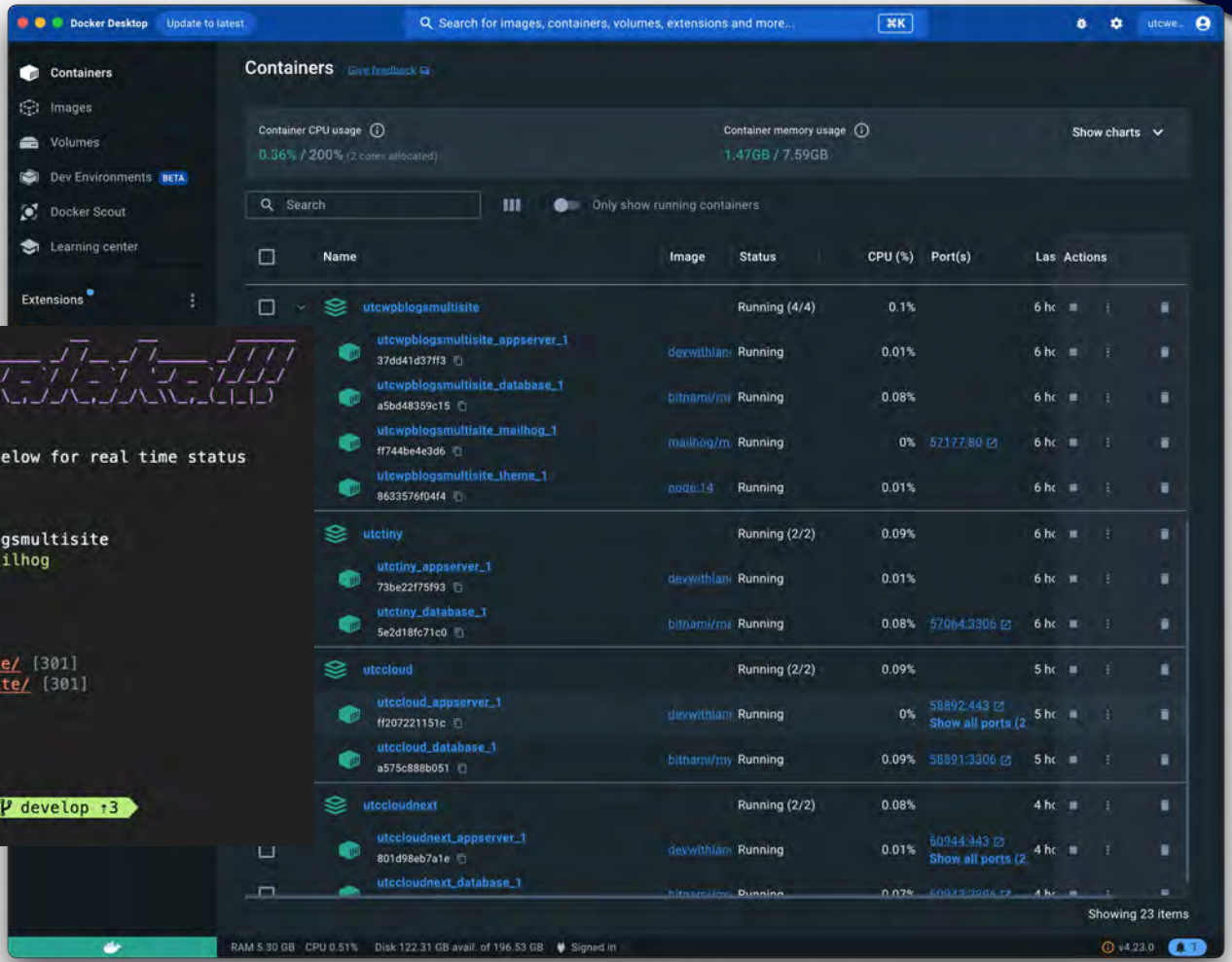

Source Control

- Github.com/UTCWeb
  - README, Wiki articles for onboarding devs
  - Issue queue for features and bugs
  - Code Review for pull requests
  - Private and Public repositories

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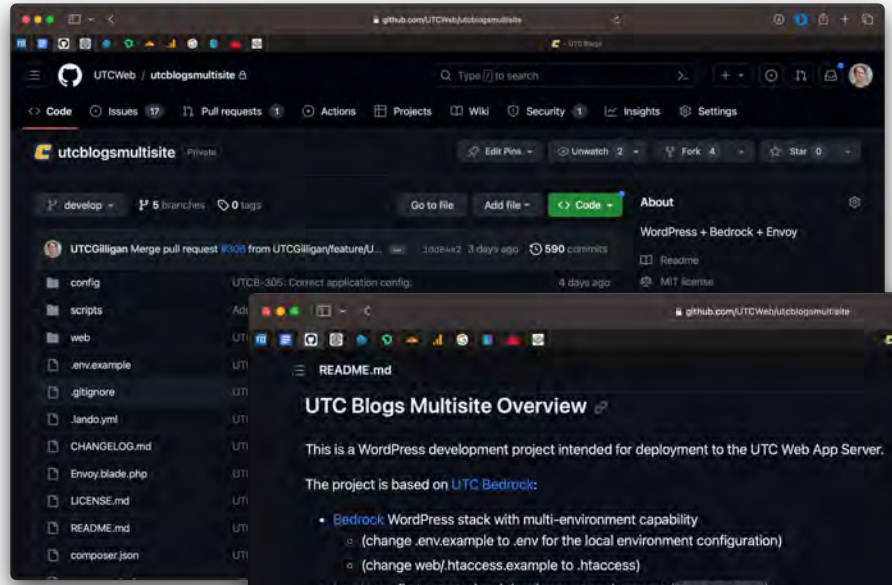

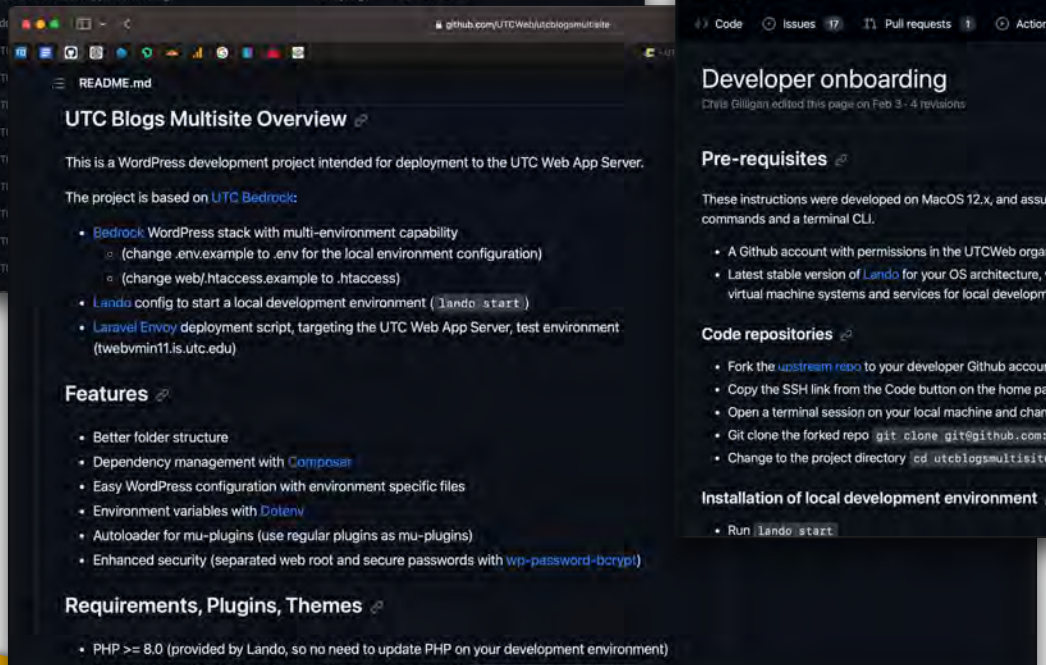

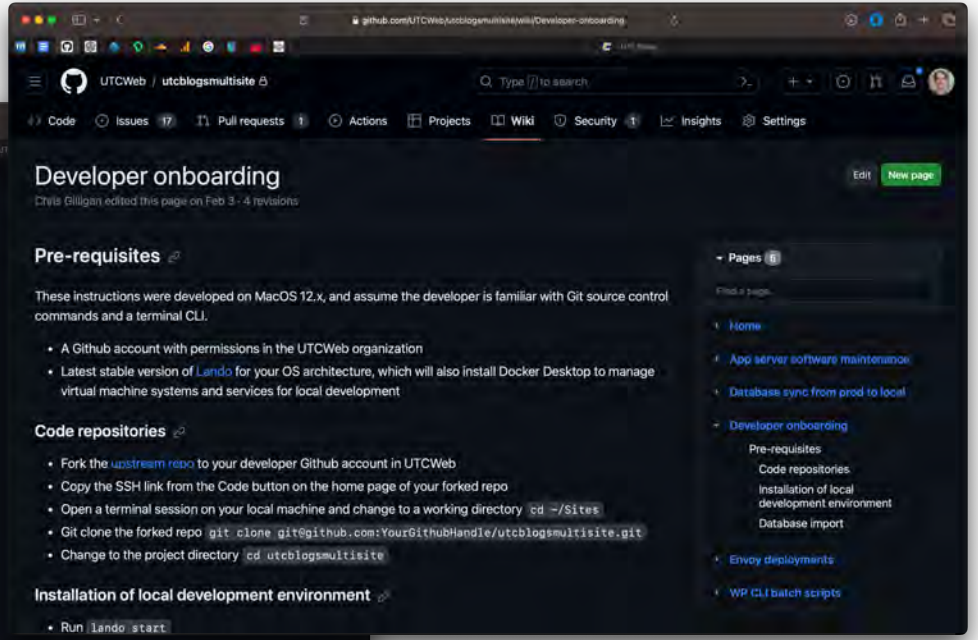

Source Control

- Github.com/UTCWeb
  - Custom repositories
    - Custom themes
    - Custom plugins
  - Paid/Pro plugins
    - Keep in private repo
    - Update via Git push
    - Tag a new release

Source Control

- Github.com/UTCWeb
  - Paid/Pro plugins and themes
    - Private repo in your Github Org
  - Fork if Open Source *(e.g. Genesis Theme)*
  - Define as custom repo type in Composer.json
    - VCS *(tracks a Git branch or releases, requires composer.json in source repo)*
    - Package *(more info required in main repo composer.json)*

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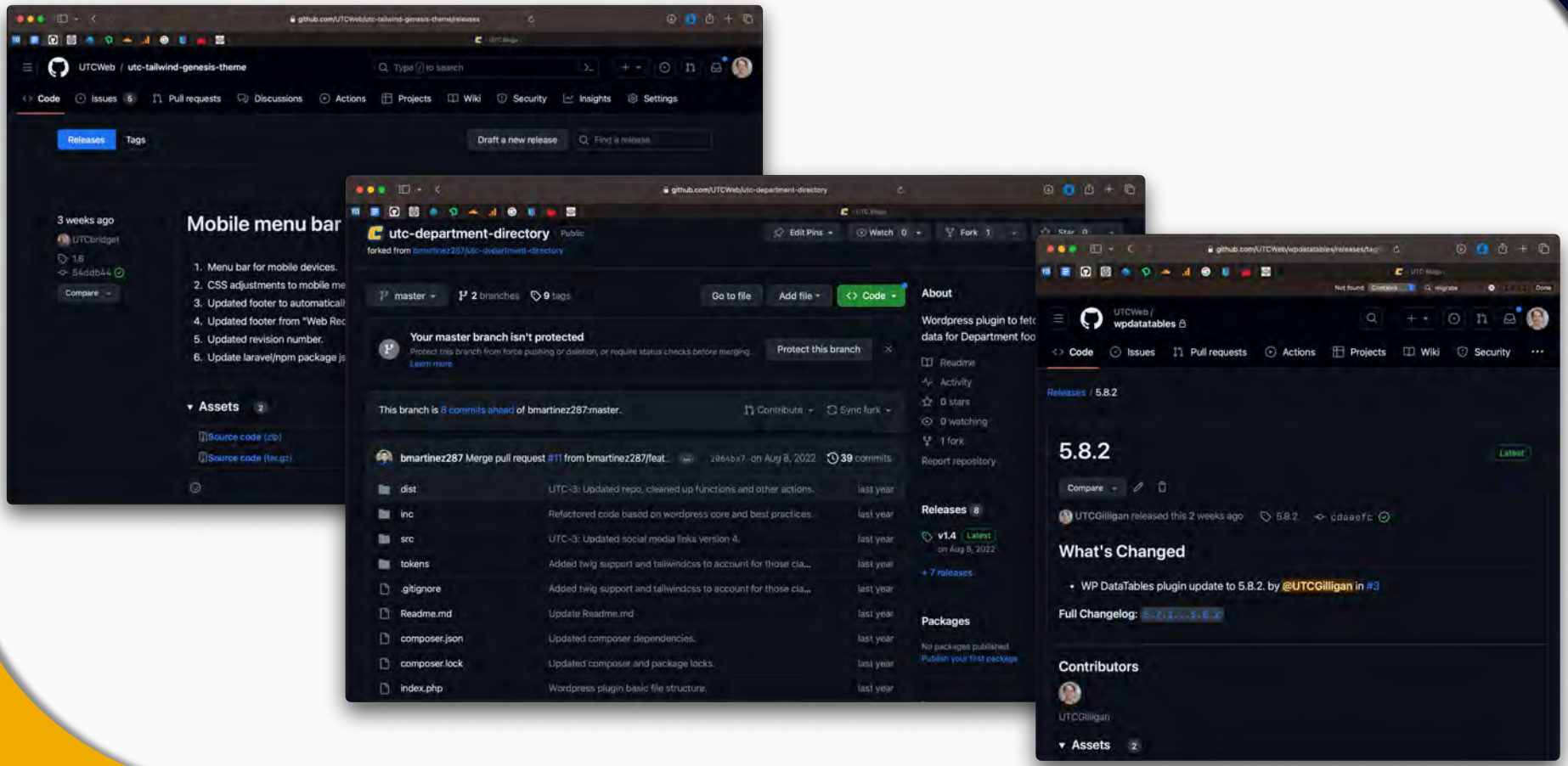

Software Package Management

- PHP Composer
  - GetComposer.org
  - Packagist.org
    - PHP software repos

Software Package Management

- WPackagist.org Repository
  - WordPress themes and plugins
    - All open-source WordPress.org assets
    - Very few pay-to-play assets
- Composer Custom Repositories
  - Custom themes and plugins *(public or private repos)*
  - Pro themes and plugins *(private repos)*

```
"require": {
    "php": "≥8.1",
    "composer/installers": "^1.12", v1.12.0
    "github-wp-theme/bootstrap-for-genesis": "v4", v4
    "ht/ht-faq": "dev-main", dev-main
    "laravel/envoy": "^2.7", v2.8.6
    "oscarotero/env": "^2.1", v2.1.0
    "roots/bedrock-autoloader": "^1.0", 1.0.4
    "roots/bedrock-disallow-indexing": "^2.0", 2.0.0
    "roots/wordpress": "<6.3", 6.2.2
    "roots/wp-config": "^1.0.0", 1.0.0
    "roots/wp-password-bcrypt": "^1.1.0", 1.1.0
    "studiopress/genesis": "dev-master", dev-master
    "tms/wpdatatables": "^5.0", 5.8.2
    "utc/it-system-status": "^2.0", 2.0.1
    "utc/newsblock": "dev-main", dev-main
    "utc/newsblock-child": "dev-main", dev-main
    "utc/utc-department-directory": "^1.0", v1.4
    "utc/utc-email-custom-posts": "^0.3", 0.3.10
    "utc/utc-tailwind-genesis-theme": "^1.5", 1.6
    "utc/wp-knowledge-base": "^1.7.0", 1.7.1.2
    "utcgithub-wp-plugin/utc-wp-yt": "dev-master", dev-master
    "vlucas/phpdotenv": "^5.3", v5.5.0
    "wikimedia/composer-merge-plugin": "^2.0", v2.1.0
    "wpackagist-plugin/add-to-any": "^1.8", 1.8.8
    "wpackagist-plugin/add-widget-after-content": "^2.4", 2.4.5
    "wpackagist-plugin/admin-color-schemes": "^3.0", 3.0.0
```

```
{
    "type": "package",
    "package": {
        "name": "utc/utc-tailwind-genesis-theme",
        "type": "wordpress-theme",
        "version": "1.6",
        "source": {
            "type": "git",
            "reference": "main",
            "url": "git@github.com:UTCWeb/utc-tailwind-genesis-theme.git"
        }
    }
},
```

```
{
    "type": "package",
    "package": {
        "name": "tms/wpdatatables",
        "type": "wordpress-plugin",
        "version": "5.8.2",
        "source": {
            "type": "git",
            "reference": "main",
            "url": "git@github.com:UTCWeb/wpdatatables.git"
        }
    }
},
```

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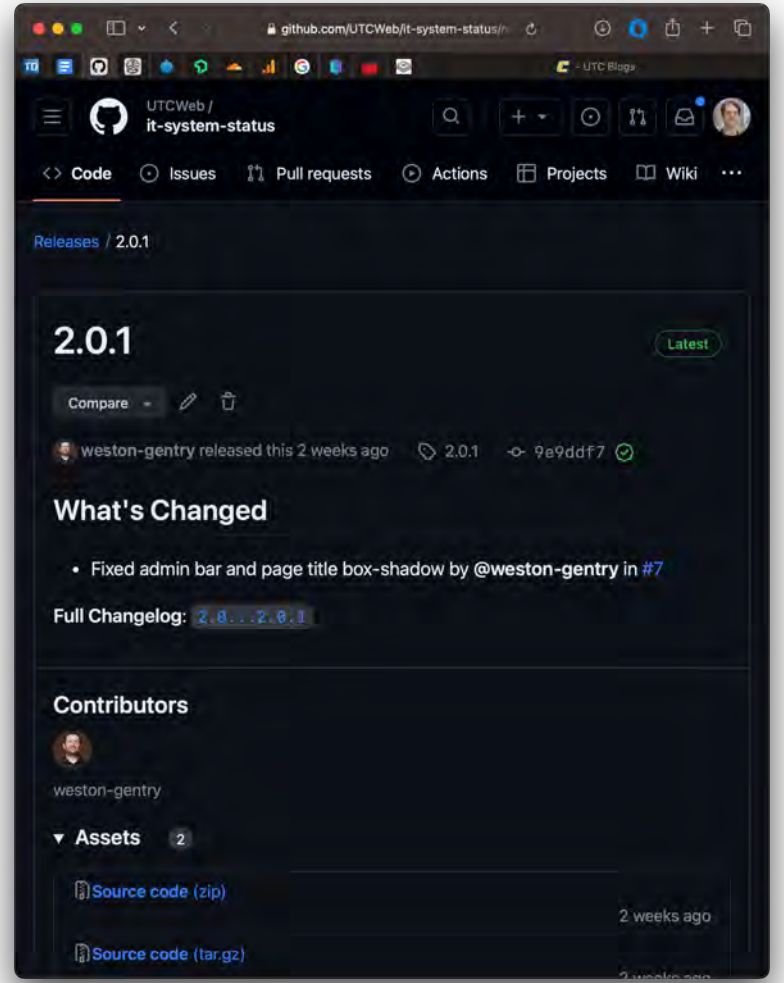

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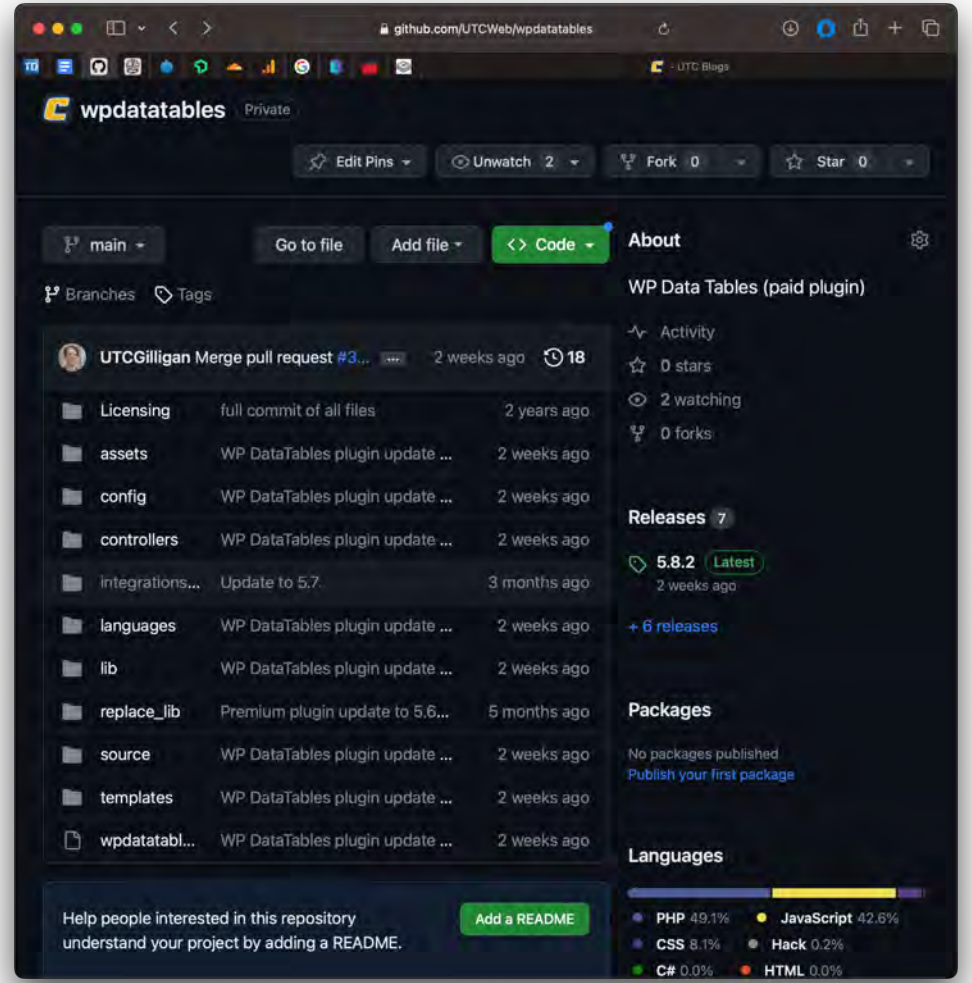

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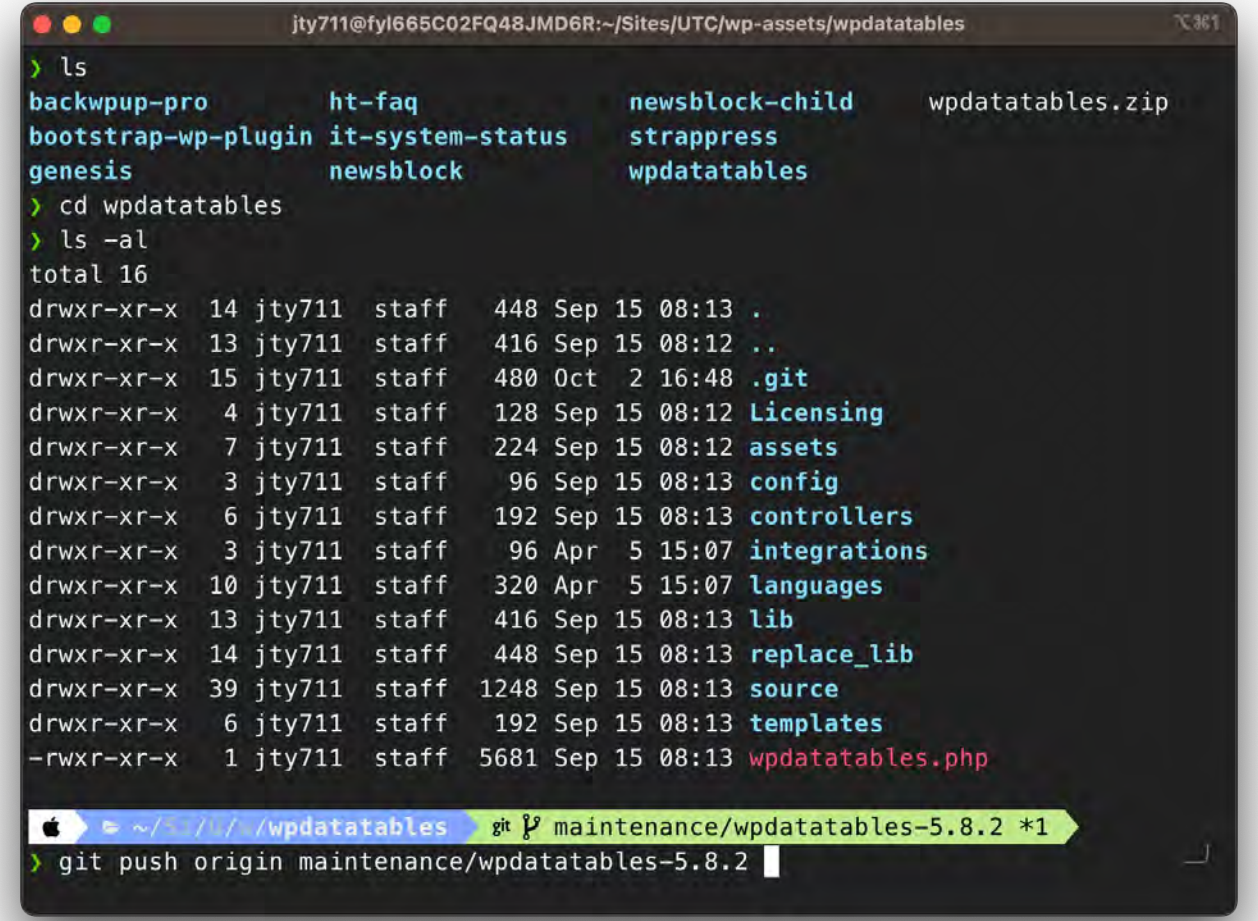
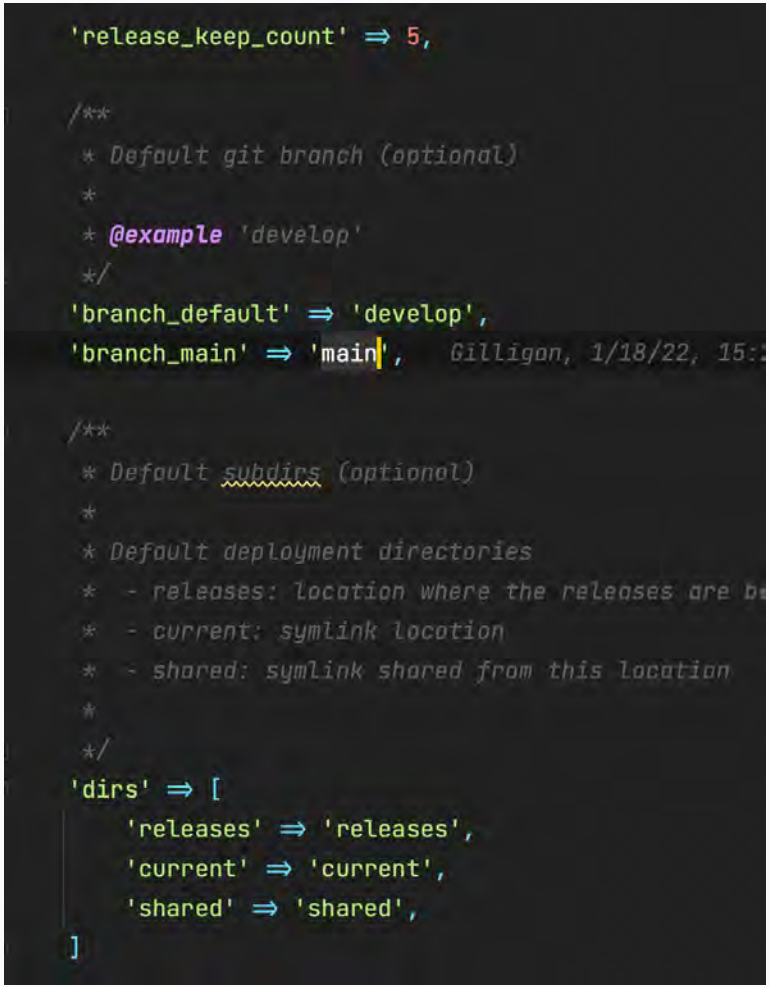


Deployment

- Laravel Envoy
  - Scripted SSH to run builds and deployments
    - Interacts with Test and Production environments
  - Node.js NPM for theme build
  - WP-CLI commands
    - DB updates, Permalinks, cache flush
  - Versioned releases, symlinked to public HTML
    - Rollback

Deployment

- Git clone
- Composer install
- NPM build/delete
- Directory Permissions
- Symlinks
- WP Permalinks
- DB Update and Cache Flush
- Reload HTTPD and PHP-FPM



```
    'release_keep_count' => 5,

    /**
     * Default git branch (optional)
     *
     * @example 'develop'
     */
    'branch_default' => 'develop',
    'branch_main' => 'main',    Gilligan, 1/18/22, 15:

    /**
     * Default subdirs (optional)
     *
     * Default deployment directories
     *   - releases: location where the releases are b
     *   - current: symlink location
     *   - shared: symlink shared from this location
     *
     */
    'dirs' => [
        'releases' => 'releases',
        'current' => 'current',
        'shared' => 'shared',
    ]
```

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```
@story('deploy-prod', [ 'on' => 'prod' ])
    fetch
    composer
    npm
    permissions
    {{ $project['deploy_tactic'] }}
    symlink
    permalinks
    flush
    purge_old
@endstory

@task('fetch')
    echo 'Deploying from branch {{ $branch }}'

    echo 'Preparing directories: {{ $base_dir }}';
    [ -d {{ $releases_dir }} ] || mkdir -p {{ $releases_dir }};
    cd {{ $releases_dir }};

    git clone -b {{ $branch }} --depth=1 {{ $repository }} {{ $release }};   Gilligan, I
@endtask

@task('composer')
    # run composer install if needed
    @if ($composer_install)
        echo 'Installing Composer dependencies';
        cd {{ $releases_dir }}/{{ $release }};
        composer clear-cache;
        composer install --prefer-dist --no-scripts --no-dev --apcu-autoloader -q -o;
        echo 'Finished Composer tasks'
    @endif
@endtask
```

Future Improvements

- Composer.json for all custom projects
  - Simplifies updates for themes and plugins
  - Cleaner composer.json in main repo
  - Better automation for composer update
    - No manual point release increments

Future Improvements

- Configuration Management: WP-CFM plugin
  - Database settings committed to codebase
    - Multisite Network settings
    - Network wide plugin settings
    - Important individual blog settings
- Github Actions
  - Deployments
  - Automated testing

Thank You!

- ChrisGilligan.com/wordpress/hew2023
- Github.com/UTCGilligan
- Github.com/UTCWeb