

# Customizing the Django Admin

When the Django Admin fails  
and what you can do to fix it

Peter Baumgartner  
Founder, Lincoln Loop

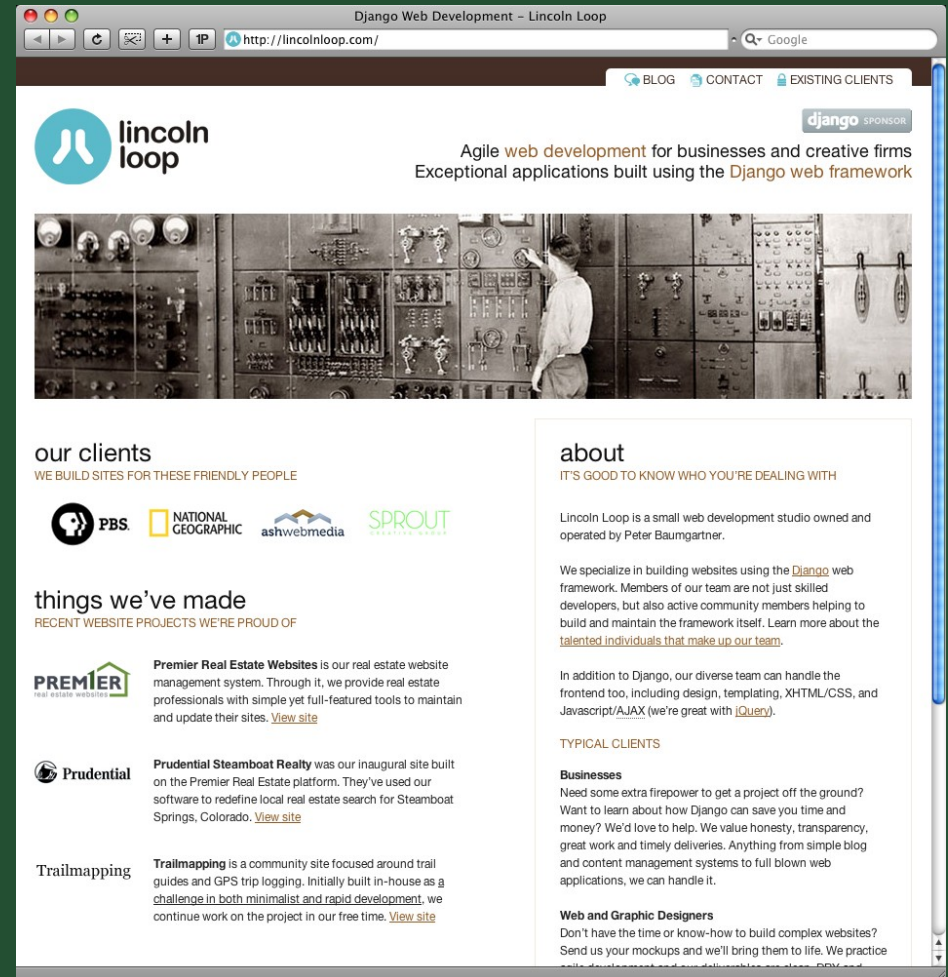
Michael Trythall  
User Experience Director, Lincoln Loop

EuroDjangoCon - May 5, 2009

# About Lincoln Loop

- Django Corporate Sponsor
- Open source contributor
- Services:
  - Development
  - Prototyping
  - Consulting
  - Training

<http://lincolnloop.com>




Django Web Development - Lincoln Loop





[BLOG](#) [CONTACT](#) [EXISTING CLIENTS](#)

**lincoln loop** django SPONSOR


Agile web development for businesses and creative firms  
Exceptional applications built using the Django web framework

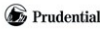


**our clients**  
WE BUILD SITES FOR THESE FRIENDLY PEOPLE

**things we've made**  
RECENT WEBSITE PROJECTS WE'RE PROUD OF

 **Premier Real Estate Websites** is our real estate website management system. Through it, we provide real estate professionals with simple yet full-featured tools to maintain and update their sites. [View site](#)

 **Prudential Steamboat Realty** was our inaugural site built on the Premier Real Estate platform. They've used our software to redefine local real estate search for Steamboat Springs, Colorado. [View site](#)

**Trailmapping** **Trailmapping** is a community site focused around trail guides and GPS trip logging. Initially built in-house as a [challenge in both minimalist and rapid development](#), we continue work on the project in our free time. [View site](#)

**about**  
IT'S GOOD TO KNOW WHO YOU'RE DEALING WITH

Lincoln Loop is a small web development studio owned and operated by Peter Baumgartner.

We specialize in building websites using the [Django](#) web framework. Members of our team are not just skilled developers, but also active community members helping to build and maintain the framework itself. Learn more about the [talented individuals that make up our team](#).

In addition to Django, our diverse team can handle the frontend too, including design, templating, XHTML/CSS, and Javascript/AJAX (we're great with [jQuery](#)).

**TYPICAL CLIENTS**

**Businesses**  
Need some extra firepower to get a project off the ground? Want to learn about how Django can save you time and money? We'd love to help. We value honesty, transparency, great work and timely deliveries. Anything from simple blog and content management systems to full blown web applications, we can handle it.

**Web and Graphic Designers**  
Don't have the time or know-how to build complex websites? Send us your mockups and we'll bring them to life. We practice self-development and our deliverables are clean, DRY and

# Overview

- User Interface is important
- Default Admin UI is one-size-fits-all. User experience is not.
- What can we do to improve upon it?
- How do we implement those improvements?

# (Some) Problems We Face

- Clients want control over their web site
- Clients don't want to pay for a minor changes
- Clients often lack technical knowledge
- Clients may not have specifications (just ideas)
- Limited project and developer time
- Etc, etc...

# Problems with New, Custom Systems

“ Easy is Hard ”


- Peter Lewis, NY Times

- Time consuming - Research, Specs, Dev, Test
- Hard to tell right from wrong
- Good chance you might not nail it
- Reinventing the wheel in most cases

So, What's the Solution?

# Leverage the Django Admin!

Yay Ponies!



| Django Site Administration |  |
|----------------------------|--|
| <b>Site administration</b> |  |
| Auth                       |  |
| Groups                     | <a href="#">+ Add</a> <a href="#">Change</a> |
| Users                      | <a href="#">+ Add</a> <a href="#">Change</a> |
| Comments                   |  |
| Comments                   | <a href="#">+ Add</a> <a href="#">Change</a> |
| Contact                    |  |
| Contacts                   | <a href="#">+ Add</a> <a href="#">Change</a> |
| Interactions               | <a href="#">+ Add</a> <a href="#">Change</a> |
| Organizations              | <a href="#">+ Add</a> <a href="#">Change</a> |
| Discount                   |  |
| Discounts                  | <a href="#">+ Add</a> <a href="#">Change</a> |
| Giftcertificate            |  |
| Gift Certificates          | <a href="#">+ Add</a> <a href="#">Change</a> |
| Gift certificate products  | <a href="#">+ Add</a> <a href="#">Change</a> |
| L10N                       |  |
| Countries                  | <a href="#">+ Add</a> <a href="#">Change</a> |

# The Good News

- Handful of reusable apps that alleviate some of the pain
- Admin is easy to extend, customize, etc.
- Djangonauts are thinking about these problems
- Lots of core functionality already exists in the admin

# Why Care About UI?

# Because...

- UI is the gateway to application logic
- Users remember bad experiences
- Good experiences = Happy Customers = Profit!
- Contributing helps Django mature
- Good UI reduces the need for documentation & support, but isn't a complete substitute!

# Problems with the Default Admin

# Not Informative or Assistive

- No dashboard, statistics, or recent (user) activity
- No actions (or models) highlighted or given priority
- No assistance/help for beginner users
- Impact from changes is not always clear
- Disconnect from external systems

# Dashboard & Primary Actions Example

The screenshot displays the WordPress 2.8 Demo dashboard. At the top, the header includes the WordPress logo, the text "WordPress 2.8 Demo" with a "Visit site" link, and user information: "New Post", "Howdy, demo | Turbo | Log Out". Below the header is a sidebar with navigation links: Dashboard, Posts (with sub-links: Edit, Add New, Post Tags, Categories), Media (with sub-links: Library, Add New), Links, Pages, Comments, Profile, and Tools. The main content area is titled "Dashboard" and features several widgets:

- Right Now**: A summary widget titled "At a Glance" showing statistics: 1 Post, 1 Comment, 1 Page, 1 Approved, 1 Category, 0 Pending, 1 Tag, and 0 Spam.
- QuickPress**: A content creation widget with fields for Title, Content, and Tags. It includes an "Upload/Insert" section with icons for image, gallery, audio, and video. Action buttons include "Save Draft", "Reset", and "Publish".
- Recent Comments**: A widget showing a comment from "Mr WordPress" on "Hello world! #". The comment text is: "Hi, this is a comment. To delete a comment, just log in and view the post's comments. There you will have ...".
- Recent Drafts**: A widget stating "There are no drafts at the moment".
- WordPress Development Blog**: A link to the WordPress Development Blog.

WordPress informs the user of the basics

# Doesn't Fit Into Customer Mental Models

- Relationships (e.x. hierarchy) not intuitive
- Apps are not organized by context
- Little (or no) navigation outside of breadcrumbs
- Doesn't mimic familiar process and workflow

# Grouping & Navigation Done Right

The screenshot shows a web application interface for managing products. The main heading is "Your Products" with a sub-link "Add a new product". A navigation bar at the top includes "Orders (11)", "Products", "Collections", "Blogs & Pages", "Navigation", and "Marketing". A secondary navigation bar includes "Assets" and "Preferences".

On the left, there are filters for "Filter products by" (American Apparel vendor) and "Select: all, none". Below this, a table lists products with their inventory levels. A context menu is open over the "Blue Tee Basic" product, showing options like "Publish", "Unpublish", "Delete", "Add to collection", "Frontpage", and "My new collection".

| Product   | Inventory                                       |
|---|---|
| <input checked="" type="checkbox"/> <a href="#">Blue Tee Basic</a><br>Tshirt<br>American Apparel      | Extra Small: 3, Small: 12, Medium: 18, Large: 2 |
| <input type="checkbox"/> <a href="#">Green Tee Basic</a><br>Tshirt<br>American Apparel                | Extra Small: 3, Small: 12, Medium: 18, Large: 2 |
| <input type="checkbox"/> <a href="#">Khaki Fleece Zipper</a><br>Zipper<br>American Apparel            | Extra Small: ∞, Small: ∞, Medium: ∞, Large: ∞   |
| <input checked="" type="checkbox"/> <a href="#">Red Tank Top</a><br>Tank Top<br>American Apparel      | Extra Small: 5, Small: 9, Medium: 12, Large: 0  |
| <input type="checkbox"/> <a href="#">Striped Tank Top Blue/Orange</a><br>Tank Top<br>American Apparel | Small: 12, Medium: 10, Large: 3                 |
| <input type="checkbox"/> <a href="#">Striped Tank Top Red/White</a><br>Tank Top<br>American Apparel   | Small: 12, Medium: 10, Large: 3                 |
| <input type="checkbox"/> <a href="#">White Tank Top</a><br>Tank Top<br>American Apparel               | Extra Small: 2, Small: 5, Medium: 0, Large: 2   |

On the right side, there are sections for "Vendors" (listing American Apparel and others) and "Product Types" (listing Apparel, Binding, etc.). At the bottom right, there is an "Inventory" section with a link to "inventory overview" and an "Import & Export" section.

# Admin Clutter

**Site administration**

|                                  |  |
|----------------------------------|--|
| <b>Auth</b>                      |  |
| <b>Groups</b>                    | <a href="#">+ Add</a> <a href="#">Change</a> |
| <b>Users</b>                     | <a href="#">+ Add</a> <a href="#">Change</a> |
| <b>Comments</b>                  |  |
| <b>Comments</b>                  | <a href="#">+ Add</a> <a href="#">Change</a> |
| <b>Contact</b>                   |  |
| <b>Contacts</b>                  | <a href="#">+ Add</a> <a href="#">Change</a> |
| <b>Interactions</b>              | <a href="#">+ Add</a> <a href="#">Change</a> |
| <b>Organizations</b>             | <a href="#">+ Add</a> <a href="#">Change</a> |
| <b>Discount</b>                  |  |
| <b>Discounts</b>                 | <a href="#">+ Add</a> <a href="#">Change</a> |
| <b>Giftcertificate</b>           |  |
| <b>Gift Certificates</b>         | <a href="#">+ Add</a> <a href="#">Change</a> |
| <b>Gift certificate products</b> | <a href="#">+ Add</a> <a href="#">Change</a> |
| <b>L10N</b>                      |  |
| <b>Countries</b>                 | <a href="#">+ Add</a> <a href="#">Change</a> |
| <b>Newsletter</b>                |  |
| <b>Subscriptions</b>             | <a href="#">+ Add</a> <a href="#">Change</a> |
| <b>Payment</b>                   |  |
| <b>Payment Options</b>           | <a href="#">+ Add</a> <a href="#">Change</a> |
| <b>Product</b>                   |  |

**Recent Actions** ([show](#))

**Satchmo Orders** ([hide](#))

**New Orders**

**Orders in Process**

**View all Orders**

**Admin Tools** ([hide](#))

- [Edit Site Settings](#)
- [Export Products as CSV](#)
- [Edit Inventory](#)
- [Export Product Defs](#)
- [Product Variation Manager](#)
- [Cache Status](#)

# Missing Features

- Missing common web tools like WYSIWYG, file management, etc
- Difficult to recover from actions (no undo)
- Better management for complicated models
- Project-wide search

# Undo & Help Example

The screenshot shows a Gmail interface with a yellow notification bar at the top stating: "The conversation has been moved to the Trash. [Learn more](#) [Undo](#)". A black arrow points from the "Undo" link in the notification bar to the search bar of a "Gmail Help" window. The "Gmail Help" window displays the "Deleting messages" article, which explains that deleted messages go to the Trash and provides instructions on how to delete an entire conversation.

Search Mail Search the Web [Show search options](#)  
[Create a filter](#)

The conversation has been moved to the Trash. [Learn more](#) [Undo](#)

com - Titanium diving knife hunting knife

ve to ▼ Labels ▼ More actions ▼ Refresh

d, Unstarred

Google  Search Gmail Help Search the

### Gmail Help

[Gmail Home](#) [Google Help](#) > [Gmail Help](#) > [Your Messages](#) > [Deleting](#) > Deleting messages

#### Deleting messages

Gmail lets you delete either an entire [conversation](#) or one message from a conversation. Deleted messages are a lot like the stuff in the trash can in your kitchen: eventually, it's all going in the big dumpster outside, but for a little while, you can still rummage through it if you lost something important. Gmail will empty messages from your **Trash** automatically after 30 days, or you can permanently delete messages yourself.

- Here's how you can get rid of an entire conversation:
  1. Open the message (or select the checkbox next to it).
  2. Click the **Delete** button to move the message to **Trash**.

[Help topics](#)

- [Your Account](#)
- [Your Messages](#)
- [Access Choices](#)
- [Your Contacts](#)
- [Your Settings Tabs](#)
- [Troubleshooting](#)

[Help forum](#)

[What's New](#)

#### Known issues with O

Review our [Known issues](#) for bugs, suggestions, and more.

#### Recommended articles

1. [Should I archive](#)
2. [Archiving mail](#)
3. [Deleting sent messages](#)
4. [Conversations](#)
5. [Moving messages](#)

#### Help resources

[Getting started](#)  
A beginner's guide to Gmail.

# Poor Display for Complex Models

Meta description for this product

---

**Item Dimensions (Hide)**

Length:  Length units:  Width:   
Width units:  Height:  Height units:

Weight:  Weight units:

---

**Tax (Hide)**

Taxable

Tax Class:  +  
If it is taxable, what kind of tax?

---

**Related Products**

Related Items:

- A really neat book
- A really neat book (Hard cover)
- A really neat book (On tape)
- A really neat book (Soft cover)
- Django Rocks shirt
- Django Rocks shirt (Large/Black)
- Django Rocks shirt (Large/Blue)
- Django Rocks shirt (Large/White)
- Django Rocks shirt (Medium/Black)
- Django Rocks shirt (Medium/Blue)
- Django Rocks shirt (Medium/White)

+

# Field Count

```
($('input').length - $('input:hidden').length) + $('select').length + $('textarea').length
```

65

# Planning Customizations

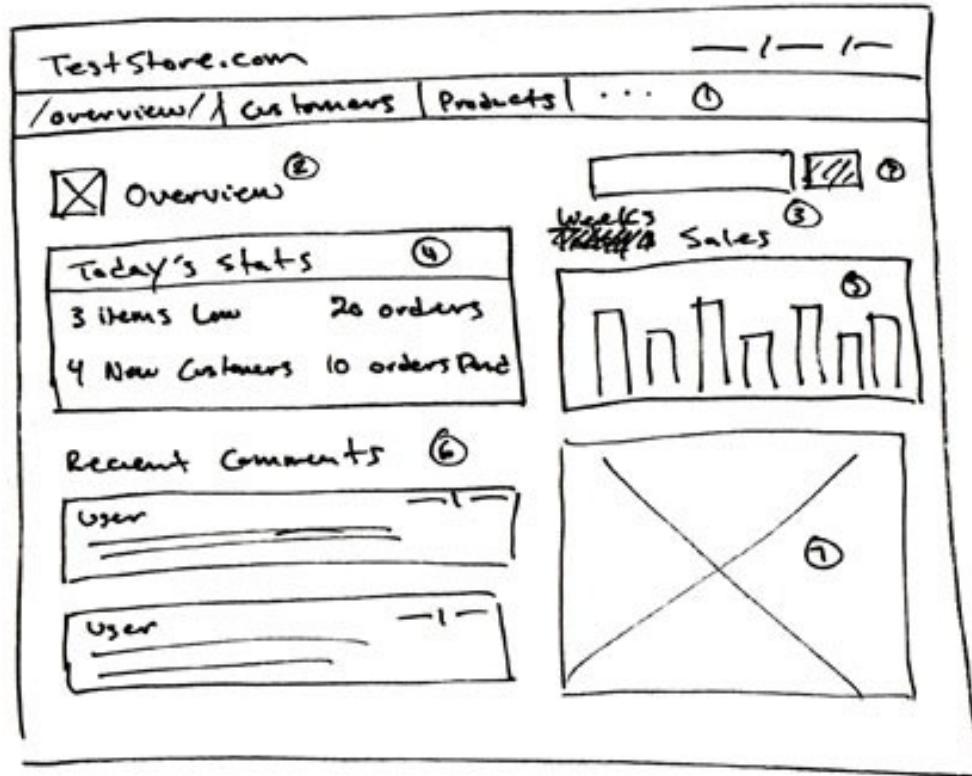
# Get to Know Your Customer

- Learn (or ask) about the industry, workflow, etc.
- Understand the needs of the different roles on the Customer's team
- Put yourself in their shoes (empathy)
- Learn the lingo, use it in your designs (laptop vs. notebook)
- Learn about previously used tools, pros and cons

# Brainstorming

- Welcome all ideas, decide on what's reasonable
- Embrace sketches to convey ideas and for clarification
- Get feedback early and often on ideas, even in development
- Don't be afraid to prototype with code
- Leverage proven UI design patterns

# Sketch Example



- 1 Tabbed Navigation
- 2 Section / Focus title (Overview → Dashboard)
- 3 Site / smart search
- 4 Today's quick stats with links to various views
- 5 This week's (configurable) sales information. Toggle between week, month
- 6 Comments to review (?)
- 7 Anything else

# Satchmo Dashboard Concept

## TestStore.com Site Administration

Welcome, Store Owner! [Help](#) / [My Account](#) / [Logout](#)

[Dashboard](#) [Products](#) [Customers](#) [Pricing](#) [Inventory](#) [Marketing](#) [Pages](#) [Reports](#) [Advanced](#)

**Welcome!** This looks like your first time accessing the admin. [Read the Beginner's Tutorial.](#)

### Dashboard

Quick View (this month) [personalize](#)

|                           |                            |
|---------------------------|----------------------------|
| <b>10</b> New Purchases   | <b>1</b> New Hack Attempt! |
| <b>5</b> Return Requests  | <b>8</b> Products Are Low! |
| <b>120</b> Discounts Used | <b>OK</b> Cache Status     |

Recent Comments [settings](#)

[PonyMan](#) on [RailsShirt](#) at 05/03/2009 10PM

This product is epic fail. I bought this thinking it would help me pick up even \*more\* chicks, but sadly, it did not do as advertises... [\[more\]](#)

[flag as spam](#) / [delete](#)

---

[AngryCustomer](#) on [PHPBlender](#) at 05/03/2009 10PM

This blender did not work, at all. My house was broken into, my dog was kicked, and my family kidnapped and sent to a goulag... [\[more\]](#)

[flag as spam](#) / [delete](#)

Search  [Search](#) [?](#)

- Django Red Shirt - Large (10) product
- Red Clove (redclove@gmail.com) user
- Red Day Sale - 20% thru 5/2 - 54 discount

Shortcuts

- [Add Product](#)
- [Add Customer](#)
- [Send Newsletter](#)
- [View Top Buyers](#)
- [View Recent Messages](#)

[Customize this area](#)

# Satchmo Dashboard Concept

## Dashboard

Search



### Quick View (this month)

[personalize](#)

**10** New Purchases      **1** New Hack Attempt!

**5** Return Requests      **8** Products Are Low!

**120** Discounts Used      **OK** Cache Status

### Shortcuts

[manage shortcuts](#)

Add Product      View Top Products

Add Customer      View Top Buyers

Send Newsletter      View Recent Messages

### Recent Comments

[settings](#)

[PonyMan](#) on [RailsShirt](#) at 05/03/2009 10PM

This product is epic fail. I bought this thinking it would help me pick up even \*more\* chicks, but sadly, it did not do as advertises... [\[more\]](#)

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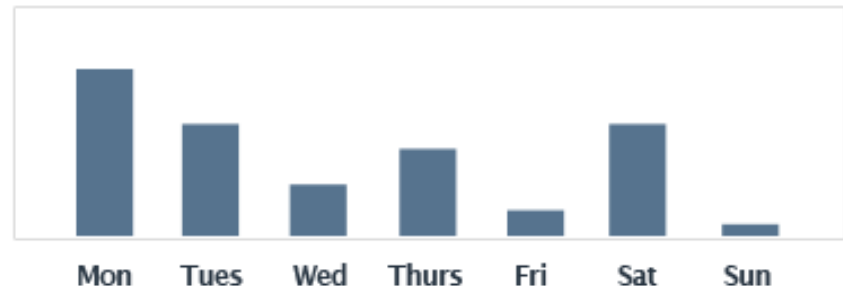
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This blender did not work, at all. My house was broken into, my dog was kicked, and my family kidnapped and sent to a goulag... [\[more\]](#)

[flag as spam](#) / [delete](#)

### Total Sold

[personalize](#)



Implement!

# Customization Options

1. ModelAdmin media
2. Custom templates
3. ModelAdmin/ModelForm hacking
4. Custom views

# Low Hanging Fruit For the Win



<http://www.flickr.com/photos/11263821@N05/2224626086>

*ModelAdmin Media*

# ModelAdmin Media Code

```
class ArticleAdmin(admin.ModelAdmin):  
    class Media:  
        css = {  
            "all": ("my_styles.css",)  
        }  
        js = ("my_code.js",)
```

# ModelAdmin Media Examples

- JavaScript
  - WYSIWYG Editor
  - AJAX
  - Fancy Inlines (drag & drop, dynamic add/delete)
    - ▶ <http://tinyurl.com/add-remove-inlines>
    - ▶ <http://www.djangosnippets.org/snippets/1053/>
  - Inject HTML
- CSS
  - Colors
  - Layout

# ModelAdmin Media Pros & Cons

- Pros:
  - Easy for one-off projects
- Cons:
  - Requires Javascript
  - Only works for the Change Form
  - Difficult to bundle as reusable app

# Custom Templates

# Custom Templates

- `django.contrib.admin` is a “reusable application”
- Key templates:
  - `admin/base.html`
  - `admin/index.html`
  - `admin/change_form.html`
  - `admin/change_list.html`

# Per Project/App/Model Templates

Templates can be overridden:

- Across an entire project  
`admin/change_form.html`
- Across an application  
`admin/<my_app>/change_form.html`
- For an individual model  
`admin/<my_app>/<my_model>/change_form.html`

# Custom Template Example

demo\_app/templates/admin/demo\_app/change\_list.html

```
{% extends  
"admin/change_list.html" %}  
  
{% block object-tools %}  
    <h1 class="errornote">  
        Look Here!  
    </h1>  
    {{ block.super }}  
{% endblock %}
```



# Custom Template Tips

- Extend, don't override
- Use `{{ block.super }}` to extend blocks
- Extend a symlink of the admin templates in the event of recursion
- Extend the `extrahead` block in `base.html` for admin-wide media

# Custom Templates in the Wild

# sorl-curator

**Administration** CHANGE PASSWORD | LOG OUT  
Welcome, **sorl**.

## Site administration

| DON'T TOUCH THIS STUFF                            |                       |
|---|-----------------------|
| Sites<br>Administer all the different sites here. | <a href="#">+ Add</a> |

| USERS & GROUPS |                       |
|----------------|-----------------------|
| Users          | <a href="#">+ Add</a> |
| Groups         | <a href="#">+ Add</a> |

| PAGES & NEWS  |                       |
|---|-----------------------|
| Pages<br>Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. | <a href="#">+ Add</a> |
| News  | <a href="#">+ Add</a> |

**RECENT ACTIONS**  
My Actions  
None available

<http://code.google.com/p/sorl-curator/>

# django-grapelli

von automatisch werkstaetten    Navigation    Patrick    Documentation    Change password    Log out

Home

## Site administration

| Blog    |       |          |
|---------|-------|----------|
| Entries | + Add | ≡ Change |

| Configuration             |       |          |
|---------------------------|-------|----------|
| Categories (PhotoVersion) | + Add | ≡ Change |
| Kategorien (Blog)         | + Add | ≡ Change |
| Kategorien (History)      | + Add | ≡ Change |
| Licenses                  | + Add | ≡ Change |
| Status (Blog)             | + Add | ≡ Change |
| Status (Gallery)          | + Add | ≡ Change |
| Status (History)          | + Add | ≡ Change |
| Status (Photo)            | + Add | ≡ Change |

| Favourites |       |          |
|------------|-------|----------|
| Favourites | + Add | ≡ Change |

| Gallery   |       |          |
|-----------|-------|----------|
| Galleries | + Add | ≡ Change |
| Photos    | + Add | ≡ Change |

| Navigation           |
|----------------------|
| Admin-Interface      |
| > Main Admin         |
| > Configuration      |
| > Blog               |
| > Image Galleries    |
| FileBrowser          |
| > FileBrowser        |
| External Ressources  |
| > Statistics         |
| > Project-Management |

| Recent Actions  |
|---|
| My Actions  |
| + Draft<br>Status (Blog)                                      |
| ≡ patrickk<br>User  |
| ≡ Article pattern: 2 Columns. Format & Images<br>Blog/Eintrag |
| ≡ sehmaschine is online<br>Blog/Eintrag                       |
| ≡ sehmaschine is online<br>Blog/Eintrag                       |
| ≡ sehmaschine is online<br>Blog/Eintrag                       |
| ≡ sehmaschine is online<br>Blog/Eintrag                       |
| ≡ sehmaschine is online<br>Blog/Eintrag                       |
| ≡ sehmaschine is online<br>Blog/Eintrag                       |
| ≡ sehmaschine is online<br>Blog/Eintrag                       |

<http://code.google.com/p/django-grappelli/>

# ella

Článek: změnit | Ella správa - Mozilla Firefox

Soubor Úpravy Zobrazit Nástroje nápověda

http://localhost:3005/newman/#/articles/article/1/

Fusce sed diam

Nadtitulek:

Upraveno:

Slug: fusca-sed-diam

Metadata

Kategorie:

ncj

Aut: North Africa  
Bar: North America  
Zdroj: Northern Ireland  
Norway

id 6  
slug north-america  
tree\_path

Foto:

Obsahy článků

Popis:

H1 H2 H3 H4 H5 H6 B I

MARKITUP!

Mauris hendrerit arcu et odio. Aenean lectus nisi, elementum ac, ullamcorper sit amet, aliquam quis, risus. Suspendisse malesuada.

Smazat Uložit jako nový záznam Uložit a přidat další záznam Uložit a pokračovat v úpravách Uložit

Hotovo

What's new? | 1, | debug log | Změnit heslo | Odlážit se

YSlow 0.848s PageRank Alexa

<http://github.com/ella/ella>

# Gondola

**Gondola CMS** Welcome, **pete**. [Documentation](#) / [Change password](#) / [Log out](#)

---

|  |  |  |   |  |
|--|--|--|---|--|
| <b>MY SITE</b><br><a href="#">Dashboard</a><br><a href="#">View Site</a><br><a href="#">Options</a><br><a href="#">Users</a> | <b>MY CONTENT</b><br><a href="#">Blog</a><br><a href="#">Pages</a><br><a href="#">Associates</a><br><a href="#">Slideshows</a> | <b>MY TERRITORY</b><br><a href="#">Areas/Neighborhoods</a><br><a href="#">Landmarks</a><br><a href="#">Developments</a><br><a href="#">Calendar/Events</a> | <b>MY LISTINGS</b><br><a href="#">Property Listings</a><br><a href="#">Property Categories</a><br><a href="#">Virtual Tours</a> | <b>MY LEADS</b><br><a href="#">CRM</a><br><a href="#">Listing Showcases</a><br><a href="#">Listing Subscribers</a><br><a href="#">Send Email</a> |
|--|--|--|---|--|

---

**Admin Menu**    [Basic View](#)    [Advanced View](#)

---

**Aloha, Pete!**  
Take a quick look at the latest leads and listings below or use the menu above to manage your site.

|  |  |  |
|--|--|--|
| <b>Latest Leads</b><br>Peter Baumgartner<br>Status: new<br>Last Updated: Apr 28th, 2:15 p.m.<br><a href="#">Manage Lead</a>   <a href="#">Contact Info</a> | <b>Featured Properties</b><br>Listing #9968856<br><a href="#">View</a>   <a href="#">Edit</a><br>Listing #9960137<br><a href="#">View</a>   <a href="#">Edit</a> | <b>Recent Actions</b><br><b>My Actions</b><br>+ Peter Baumgartner<br>Lead<br>+ Baumgartner, Peter<br>Contact<br>✎ 9960137<br>Listing<br>✎ 9968856<br>Listing<br>+ Test Poly<br>Post<br>+ test point<br>Post<br>✎ testt |
|--|--|--|

---

**My Properties**

<http://gondolacms.com/>

# Custom Template Pros & Cons

- Pros
  - Easy
  - Touches every admin view
  - No additional work to bundle with reusable apps
- Cons
  - Mostly cosmetic (not functional) changes

# ModelAdmin/ModelForm Hacking

# ModelAdmin/ModelForm Hacking

- New in Django 1.0 (newforms-admin)
- Old stuff (list\_display, fields, ordering, etc.)
- New stuff (exclude, inlines, form, etc.)
- Really New stuff (list\_editable, actions, etc.)

# Reregistering a ModelAdmin

```
from django.contrib import admin
from django.contrib.auth.admin import UserAdmin
from demo_app.models import UserProfile

class UserProfileInline(admin.TabularInline):
    model = UserProfile
    fk_name = 'user'
    max_num = 1

class CustomUserAdmin(UserAdmin):
    inlines = [UserProfileInline, ]

admin.site.unregister(User)
admin.site.register(User, CustomUserAdmin)
```

# Row-level Permissions

```
class ArticleAdmin(admin.ModelAdmin):
    def save_model(self, request, obj, form,
                  change):
        obj.user = request.user
        obj.save()

    def queryset(self, request):
        qs = self.model._default_manager.filter(
            user=request.user)
        return qs
```

# ModelForms

- Much of ModelAdmin's functionality is a wrapper around ModelForm
- If you can't do it in ModelAdmin, chances are ModelForm can help
- Pulled directly from `django.forms` and no different in functionality

# ModelForms Example

```
class AuthorForm(forms.ModelForm):
    exclude_states = ['AS', 'GU', 'MP', 'VI',]
    def __init__(self, *args, **kwargs):
        super(AuthorForm, self).__init__(*args,
                                         **kwargs)

        w = self.fields['state'].widget
        choices = []
        for key, value in w.choices:
            if key not in self.exclude_states:
                choices.append((key, value))
        w.choices = choices

class AuthorAdmin(admin.ModelAdmin):
    form = AuthorForm
```

# Caution: Here be Dragons



<http://www.flickr.com/photos/sharynmorrow/3019436/>

# ModelAdmin/ModelForm Tips

- The further you dig, the less documentation you'll find
- Don't be afraid to study the source:
  - `django.contrib.admin.sites.AdminSite`
  - `django.contrib.admin.options.ModelAdmin`
  - `django.forms.models.ModelForm`
  - `django.contrib.admin.options.InlineModelAdmin`
  - `django.forms.formsets`
- Use a debugger for sanity (`ipdb.set_trace()`)

# ModelAdmin/ModelForm Pros & Cons

- Pros
  - Flexible
  - Powerful
  - No additional work to bundle with reusable apps
- Cons
  - Gets complex quickly
  - May require getting familiar with undocumented Django internals

# Custom Views

# When in Doubt, Punt



<http://www.flickr.com/photos/bobtravis/485216368/>

# Custom Views

- The admin just wasn't built to do some things
- Other things simply aren't worth the trouble
- Build your own view and plug it into the admin



# Custom View

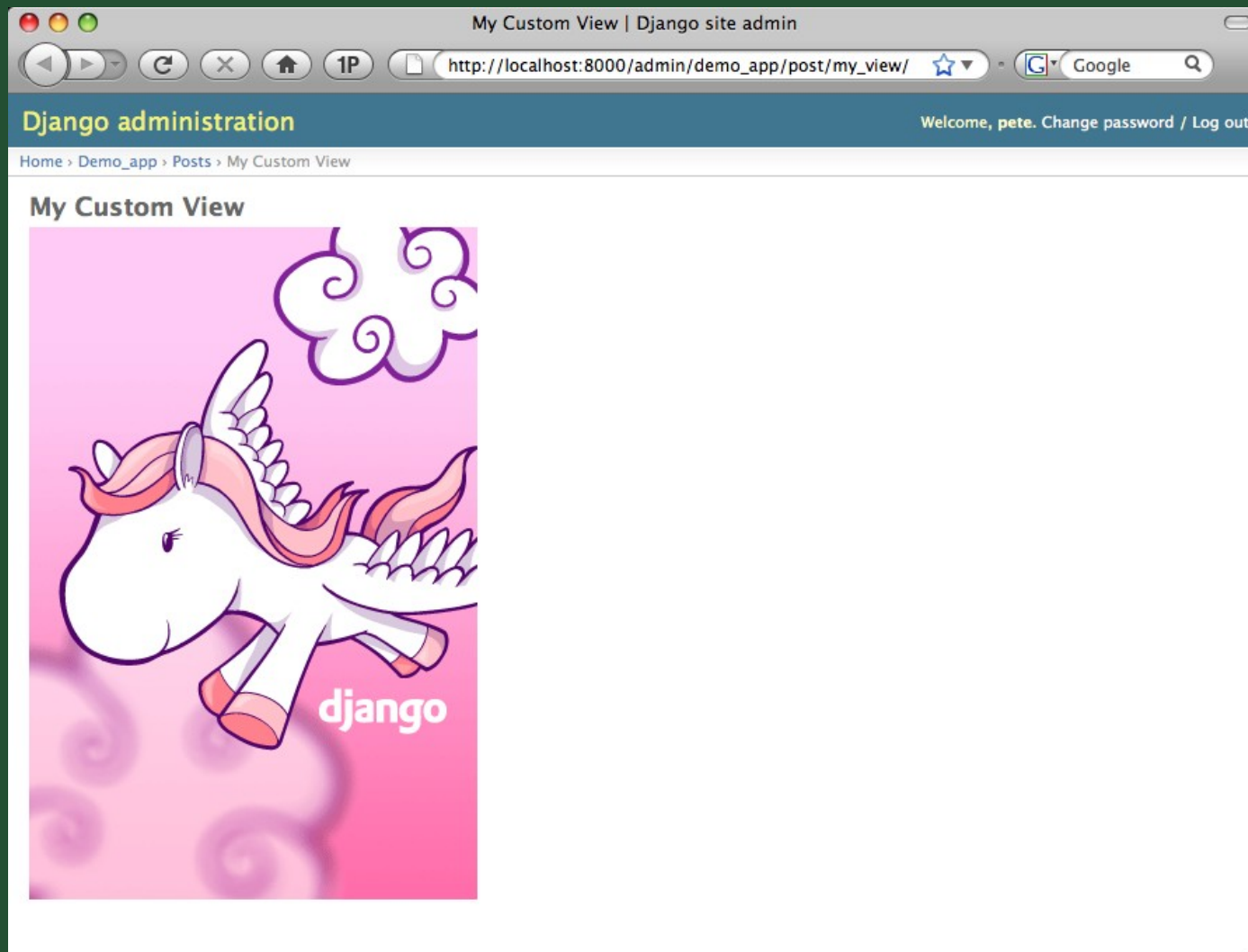
```
@permission_required('blog.add_post')
def admin_my_view(request, model_admin):
    opts = model_admin.model._meta
    admin_site = model_admin.admin_site
    has_perm = request.user.has_perm(opts.app_label \
                                     + '.' + opts.get_change_permission())
    context = {'admin_site': admin_site.name,
              'title': "My Custom View",
              'opts': opts,
              'root_path': '/%s' % admin_site.root_path,
              'app_label': opts.app_label,
              'has_change_permission': has_perm}
    template = 'admin/demo_app/admin_my_view.html'
    return render_to_response(template, context,
                              context_instance=RequestContext(request))
```

# Custom View Template

```
{% extends "admin/base_site.html" %}
{% load i18n %}
{% block breadcrumbs %}
<div class="breadcrumbs">
    <a href=".../.../.../">{% trans "Home" %}</a> &rsaquo;
    <a href=".../.../">{{ app_label|capfirst|
escape }}</a> &rsaquo;
    {% if has_change_permission %}<a
href=".../">{{ opts.verbose_name_plural|
capfirst }}</a>{% else %}{{ opts.verbose_name_plural|
capfirst }}{% endif %} &rsaquo; My Custom View
</div>
{% endblock %}

{% block content %}
    <!-- do stuff here -->
{% endblock %}
```

# Custom View Example



# Custom View Pros & Cons

- Pros
  - More flexible
  - More powerful
  - No additional work to bundle with reusable apps
- Cons
  - Can be tricky to integrate into workflow
  - You're on your own to validate forms, build templates, etc.

# Review

- UI is important. Think about your end-user
- Think about your users, not your database
- Newforms-admin gives you hooks for lots of easy wins

# Questions

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