Django Chartflo Documentation

Release 0.2

synw

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Overview

To install: `pip install django-chartflo`

Add to INSTALLED_APPS:

```
"vv",
"chartflo",
```

Add to settings:

```
VV_APPS = ["chartflo"]
```

Add to urls:

```
url(r'^dashboards/',include('chartflo.urls')),
```

Run the migrations.

CHAPTER 1

Overview

Steps to get a dashboard:

1. Generate charts
2. Create a dashboard with views (no python code to write)
3. Create templates for the dashboard views
4. Create a data pipeline to update the dashboard's charts and widgets

CHAPTER 2

Usage

The dashboards use pre-generated html charts loaded as templates. The charts generation is handled by the Dataswim library, but anything that produces html can be used.

A demo project is available for a complete example

Let's make a simple timeseries module with a dashboard as an example.

2.1 Create a model

This step is optional: charts can be produced without a model

Model (uses Django Pandas):

```
from django.db import models
from django.utils.translation import ugettext_lazy as _
from django_pandas.managers import DataFrameManager


class Serie(models.Model):
    date = models.DateField(verbose_name=_("Date"))
    value = models.FloatField(verbose_name=_("Value"))
    objects = DataFrameManager()

    class Meta:
        ordering = ("-date",)
        verbose_name = _("Serie")
        verbose_name_plural = _("Series")
```

2.2 Create charts

Charts creation code in `pipeline.py`, in a notebook or anywhere. Example for a simple timeline:

```
from dataswim import ds
from .models import Serie


query = Serie.objects.all()
# convert the Django query to a Pandas dataframe
ds.df = query.to_dataframe()
# set what fields to chart
ds.chart("date", "value")
# generate the chart
c = ds.line_()
# store the chart for later saving
ds.stack("timeline", c)
# set the path where to save it
ds.report_path = "templates/dashboards/timeseries/charts"
# save the chart as html file
ds.to_files()
```

This will save a `templates/dashboards/timeseries/charts/timeline.html` html chart

2.3 Create a dashboard

Create a dashboard in the admin with the slug `timeseries`. Create an inline view for the dashboard and set it active.

2.4 Create templates for the dashboard views

Create a template in `templates/dashboards/timeseries/views/myview_slug.html` with the view slug as filename:

```
{% include "templates/dashboards/timeseries/charts/timeline.html" %}
```

Go to `/dashboards/timeseries/` to see the result

CHAPTER 3

Single numbers

A widget showing a single number is available to include in a dashboard. It can optionaly embed a sparkline.

3.1 Simple

```
from chartflo.widgets.number import Number

n = Number()
html = n.simple(3, "Number label", icon="long-arrow-alt-up")
n.write("number_slug" , "dashboard_slug", html)
```

This will save a `dashboards/dashboard_slug/numbers/number_slug.html` file to include in a dashboard view. Icon is a Font-awesome icon name.

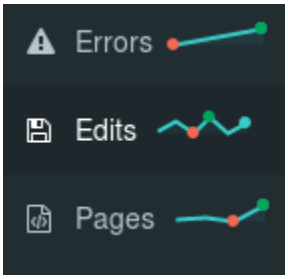
3.2 With sparkline

```
from chartflo.widgets.number import Number


n = Number()
html = n.simple(3, "Number label", spdata=[1,2,1,3})
n.write("number_slug" , "dashboard_slug", html)
```

CHAPTER 4

Sparklines



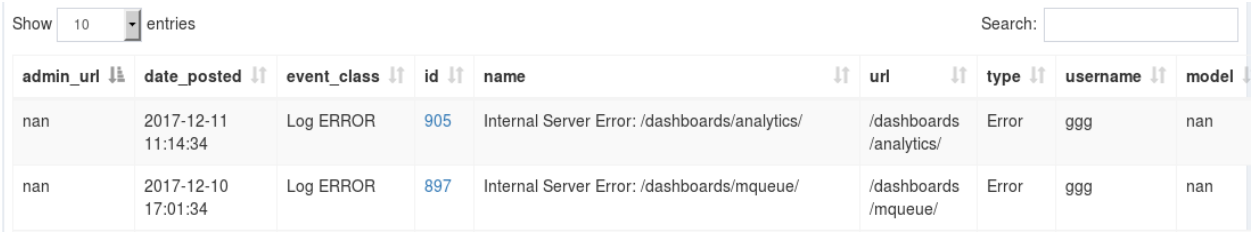
A sparkline with a limited number of datapoints.

```
from chartflo.widgets.sparkline import Sparrkline


sp = Sparkline()
html = sp.simple([1,2,2,4,1])
```

CHAPTER 5

Datables


Show 10 entries Search:

admin_url	date_posted	event_class	id	name	url	type	username	model
nan	2017-12-11 11:14:34	Log ERROR	905	Internal Server Error: /dashboards/analytics/	/dashboards /analytics/	Error	ggg	nan
nan	2017-12-10 17:01:34	Log ERROR	897	Internal Server Error: /dashboards/mqueue/	/dashboards /mqueue/	Error	ggg	nan

A widget showing tabular data.

```
from chartflo.widgets.datatable import DataTable

dt = DataTable()
# from a dataframe
dt.create("datatable_slug", "dashboard_slug", df=df, search=False)
# or from a query
dt.create("datatable_slug", "dashboard_slug", query=some_django_query)
```

This will save a `dashboards/dashboard_slug/datatables/datatable_slug.html` file to include in a dashboard view.