

Data Science for Sustainable Construction Materials

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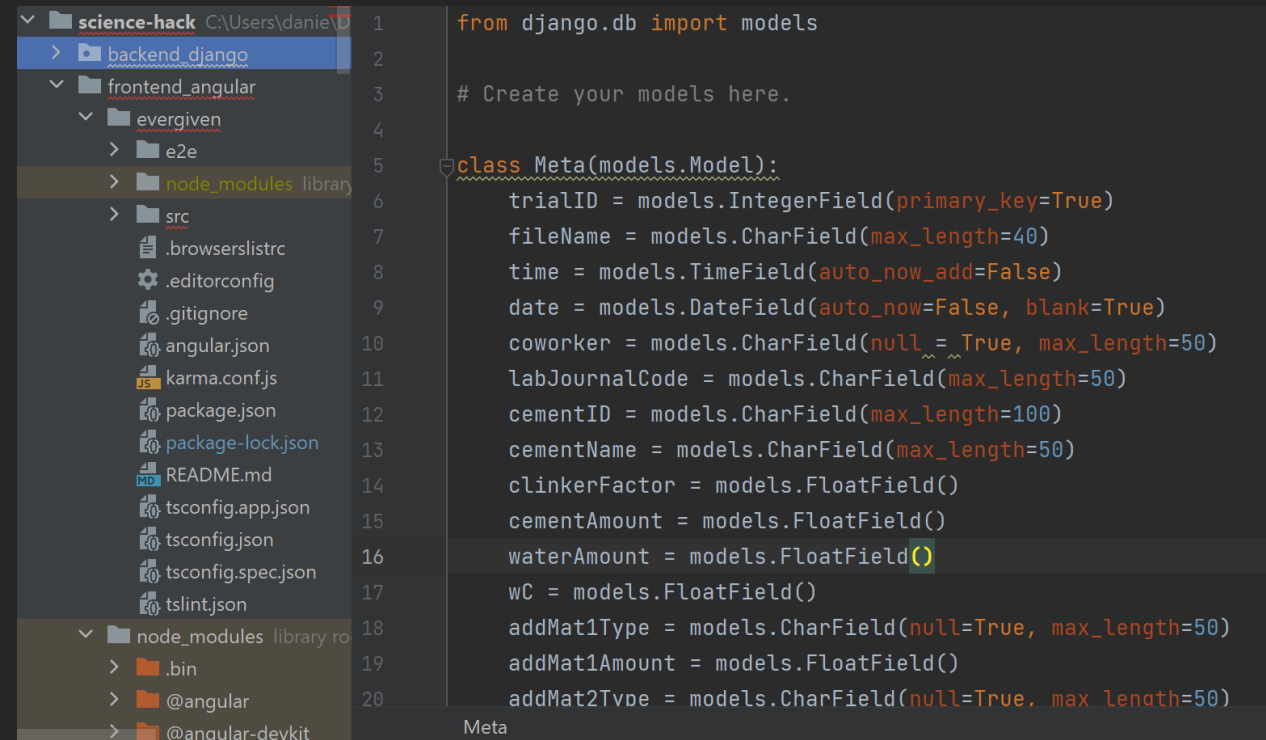


Cenvi – Cement for Environment

- Web-Based
- User friendly interaction with collected data
- Quick search through the data
- Built in Visualization function

Outline & Implementation

- Easy to use user interface
- Integrated Database
- Front-End: Angular
- Back-End: Django
- Database: PostgreSQL



```
1 from django.db import models
2
3 # Create your models here.
4
5 class Meta(models.Model):
6     trialID = models.IntegerField(primary_key=True)
7     fileName = models.CharField(max_length=40)
8     time = models.TimeField(auto_now_add=False)
9     date = models.DateField(auto_now=False, blank=True)
10    coworker = models.CharField(null=True, max_length=50)
11    labJournalCode = models.CharField(max_length=50)
12    cementID = models.CharField(max_length=100)
13    cementName = models.CharField(max_length=50)
14    clinkerFactor = models.FloatField()
15    cementAmount = models.FloatField()
16    waterAmount = models.FloatField()
17    wC = models.FloatField()
18    addMat1Type = models.CharField(null=True, max_length=50)
19    addMat1Amount = models.FloatField()
20    addMat2Type = models.CharField(null=True, max_length=50)
```

User Interface

[Home](#) [Upload](#) [Login/Logout](#)

Date:

Time:

Coworker:

Lab Journal Code:

Instrument ID:

Cement ID:

Cement Name:

Clinker Factor:

Cement Amount:

Water Amount(g):

W.C.:

Add. Mat. Type1: **Add. Mat. Type1 Amount:**

Add. Mat. Type2: **Add. Mat. Type2 Amount:**

Add. Param: **Add. Param. Value:**

mixing Time(sec):

mixing Protocol:

Temperature(°C):


Drag and drop file here
or
[Browse for file](#)

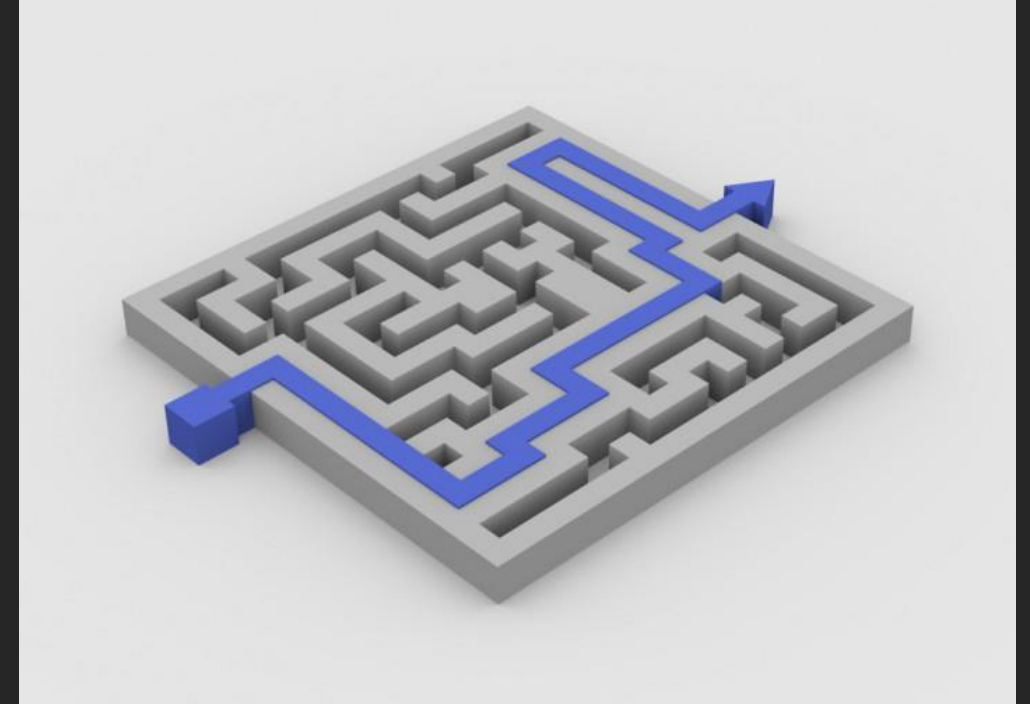
[Upload Image File](#)

- Search
- Upload
- Visualization
- Comparison

[illegible]

Impact of Cenvi

- Supports the research progress by making data interaction easier
- Conclusions from the data can be drawn quicker, thus allowing for a more targeted approach



**“Great things are not done by impulse but by
a series of small things brought together”**

- Vincent Van Gogh