

# PySmell

Intellisense for Python (and more)

<http://github.com/orestis/pysmell>

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# What it does

- Analyzes Python code, extracts information
- Provides auto-completion in editors (Vim for now)
- Aims to handle 80% of the cases
- Static analysis, so it handles all Python flavors (IronPython etc)

# How does it work

- Using built-in **compiler**
  - **parse/parseFile** to generate AST
  - **walk/visitor** to gather information about it
- Very fast: ~12 seconds to analyze Django 1.0
- Instantaneous when analyzing a single file

# Example

```
110
111 def clear(self):
112     self.cl
113     SpreadsheetElement.clearTraits(self)
114     self.clearModel()
115     self.Comment = None
116     self.clearValue()
117
118 def clearModel(self):
119     self.dropdownRange = ''
120     self.DropdownItems = None
121     self.expression = None
122
123
124 def clearValue(self):
125     self.__value = None
126     self. dropdownIndex = None
```

# Example

```
110
111     def clear(self):
112         self.clear
113         Spre clear()                m Library.Cell:Cell
114         self.clearModel()           m Library.Cell:Cell
115         self.clearTraitValue(traitName) m Library.Cell:Cell
116         self.clearTraits()           m Library.SpreadsheetElement
117         clearValue()                m Library.Cell:Cell
118     def clearModel(self):
119         self.dropdownRange = ''
120         self.DropDownItems = None
121         self.expression = None
122
123
124     def clearValue(self):
125         self.__value = None
126         self.__dropdownIndex = None
```

# Example

```
3 from django.conf import settings
4 from datetime import datetime, timedelta, date, time
5 from tagging.fields import TagField
6
7 from django.utils.translation import ugettext as _
8
9
10 class PublicEntriesManager(models.Manager):
11     def __init__(self, *args, **kwargs):
12         self.ge
13     self.get(*args, **kwargs) m django.db.models.manager:Mana
14     super.get_empty_query_set() m django.db.models.manager:Mana
15     get_or_create(**kwargs) m django.db.models.manager:Mana
16     def get_get_query_set() m django.db.models.manager:Mana
17     return super(PublicEntriesManager, self).get_query_set().fi
18
19
20 class EntryManager(PublicEntriesManager):
```

# Example

```
def getExpression(self, culture=None):
    if culture is not None and self._date is not None:
        return self._date.format(culture)
    return self.__expression

def __normaliseExpression(self, expressionType, culture):
    expressionType.normalise
    self._date = Main.SelectionNormaliser.SelectionNormaliser(normalise(grid))
    if not isinstance(index, Library.CellRange.CellRange):
        return

    if IsNumber(self.__expression.strip()):
        self.__expression = self.__expression.strip()
        return

    if self.__expression.startswith(' '):
```

# Type inferencing

- **Won't** be able to detect everything
- **Will** be able to narrow down choices
- Reverse duck typing (duck inferencing)

# Duck inferencing

- A Dog **walks** and **barks**, a Duck **walks** and **quacks**
- Something **walks**? Dog or Duck.
- Something **walks** and **quacks**? Duck.
- Something **barks**? Definitely Dog.
- Works surprisingly well!

# How you can help

- Use it
- Report cases where it doesn't work
- Extend it (other editors, other usages)
- (Patches always welcome!)

# Where to get it

<http://github.com/orestis/pysmell>

(You don't need git - tgz available)

<http://orestis.gr>