# Aufreinigung von OCR-erkannten Texten mit Python

### Adrian Pachzelt

Universitätsbibliothek J. C. Senckenberg

Einführung in Python

## Das Ausgangsproblem

### **Original Seite**

#### Planet Earth

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# Das Ausgangsproblem

### Original Seite

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#### Planet Earth

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## Das Ausgangsproblem



### Und so wird's gemacht!

Einführung in Python

# Ja nee is klar!



### Original Seite

# Planet Earth

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Our planet photographed from "Apollo - 17". You can notice the big ice polar cap in Antarctica.



#### Seasons

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#### Structure

The central part of Earth is a metal core; it's very hot – some 4000°C, and it's surrounded by a shell of liquid iron that creates the magnetic field of Earth. Outer layers form the mantle made up of rocky substances, over which are lighter substances that form the crust. The atmosphere is made of nitrogen (77%), oxygen (21%), and a mixture of water vapor and other gases.

#### Magnetic bubble

The rotation of Earth around its axis generates forceful electrical currents in the iron core of the planet and this creates the magnetic field. This field forms a giant "bubble" in the near-Earth space called the "magnetosphere". Magnetosphere protects Earth from the solar wind – a flow of charged particles emitted by the Sun. These particles are trapped by the magnetic field in two lunge rings – Van Allen's belts. When spacecrafts travel through the Van Allen's belts, the electrical equipment of the former may suffer maflunction caused by these

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#### Breite

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#### Seasons

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#### Structure

The central part of Earth is a metal core; it's very hot – some 4000°C, and it's surrounded by a shell of liquid iron that creates the magnetic field of Earth. Outer

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Einführung in Python

# Python3 to the rescue!



# Warum eigentlich Python?

- Alternativen: Java, C/C++, JavaScript
  - Können alles und mehr...
  - Suuuuper schnell!
  - Einfach sich in den Fuß zu schießen!
- Schnell und einfach zu lernen
  - Semantik ist an natürliche Sprache angelehnt
  - Ästhetische Syntax
  - Keine Typdeklaration bei Variablen

```
time = 1
time = "DAS! IST! PYTHON!"
```

Schnelle Installation und import von Modulen

```
import json
from json <mark>import</mark> dump
from json import dump as Dumper
```

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# Für die Behandlung von ABBYY-XML brauchen wir:

- For-Schleifen: Wiederholen von Befehlen
- Funktionen aufrufen: Das coole Zeug!

lst = ["Das ", "ist ", "ein ", "Text."]

for t in lst:
 print(t)

Ausgabe: "Das ist ein Text."

### For-Schleifen Syntax

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text.capitalize() # "Das ist ein text."

```
text = "das ist ein text."
text.capitalize() # "Das ist ein text."
text.upper() # "DAS IST EIN TEXT."
```

```
text = "das ist ein text."
text.capitalize() # "Das ist ein text."
text.upper() # "DAS IST EIN TEXT."
text.find("i") # 4
text.find("|") # -1
```

```
text = "das ist ein text."
text.capitalize() # "Das ist ein text."
text.upper() # "DAS IST EIN TEXT."
text.find("i") # 4
text.find("!") # -1
with open("text.txt", "w") as output:
    output.write(text)
```

### Funktionsaufruf Syntax

Variablenname.Funktionsname(Parameter1, Parameter2, ...)

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### Funktionsaufruf Syntax

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# Livedemo-Time!

### Bildnachweis

XML-Symbol, TXT-Symbol: Icon made by *flaticon* from www.flaticon.com

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