PyComP

Release 1.0

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PyComP is a Python library for compressing and decompressing data. It provides a simple and efficient way to reduce the size of data files without losing any information.

Features

PyComP has a range of features that make it a powerful tool for data compression:

- **Supports multiple algorithms:** PyComP supports several compression algorithms, including Huffman, Arithmetic, Range, ABS and ANS, which can be selected based on your specific requirements.
- **Customizable compression level:** PyComP allows you to specify the compression level, which determines the balance between compression ratio and speed. Higher levels result in smaller file sizes but slower processing times.
- **Easy-to-use functions:** PyComP provides a range of convenient functions for compressing and decompressing data and files.

Compression algorithms

Here is a list of algorithms implemented.

- *Huffman codes <https://github.com/JEENB/PyComP/blob/version1.0/PyComP/compressors/huffman.py>*
- *rANS <https://github.com/JEENB/PyComP/blob/version1.0/PyComP/compressors/rANS.py>*
- *sANS <https://github.com/JEENB/PyComP/blob/version1.0/PyComP/compressors/sANS.py>*
- *uABS <https://github.com/JEENB/PyComP/blob/version1.0/PyComP/compressors/uABS.py>*
- *Arithmetic coder <https://github.com/JEENB/PyComP/blob/version1.0/PyComP/compressors/arithmetic.py>*
- *Symmetric Numeral <https://github.com/JEENB/PyComP/blob/version1.0/PyComP/compressors/symmetric_numeral.py>*

Install the `PyComP` package

```
git clone <repo> and cd

pip install -e . #install the package in a editable mode
```

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PYCOMP

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1.3 Arithmetic Coding

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1.5 ANS

1.6 uABS

1.7 Streaming ANS

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1.9.2 utils.bit_array_utils module

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