## msaSDK Module

```
.models.sdu
```

Module for the Semantic Document Understanding - Content

### Classes

### **SDUAttachment**

```
Bases: SQLModel
Attributes
binary class-attribute
  binary: bool = False
charset class-attribute
  charset: str = ''
content_type class-attribute
  content_type: str = ''
disposition class-attribute
  disposition: str = ''
encoding class-attribute
  encoding: str = ''
id class-attribute
```

```
id: str = ''
metadata class-attribute
  metadata: Dict = {}
name class-attribute
  name: str = ''
path class-attribute
  path: str = ''
payload class-attribute
  payload: str = ''
Status class-attribute
  status: str = ''
text class-attribute
  text: SDUText = SDUText()
Classes
Config
    Attributes
    orm_mode class-attribute
      orm_mode = False
```

### **SDUBBox**

Bases: SQLModel

**Attributes** 

```
x0_{\tiny{\texttt{class-attribute}}}
  x0: float = -1
X1 class-attribute
  x1: float = -1
y0 class-attribute
  y0: float = -1
y1 class-attribute
  y1: float = -1
Classes
Config
    Attributes
    orm_mode [class-attribute]
       orm_mode = False
```

### **SDUContent**

```
Bases: SQLModel

Attributes

attachments class-attribute

attachments: List[SDUAttachment] = []

layouts class-attribute

layouts: List[SDULayout] = []
```

**Classes** 

### Config

```
Attributes

orm_mode class-attribute

orm_mode = False
```

### **SDUData**

```
Bases: SQLModel
Attributes
CONVERTER Class-attribute
  converter: List[str] = []
email class-attribute
  email: SDUEmail = SDUEmail()
images class-attribute
  images: List[SDUPageImage] = []
npages class-attribute
  npages: int = 0
pages class-attribute
  pages: List[SDUPage] = []
Stats class-attribute
  stats: SDUStatistic = SDUStatistic()
text class-attribute
  text: SDUText = SDUText()
```

# Classes Config Attributes orm\_mode elass-attribute orm\_mode = False Functions addPagePreProcessing addPagePreProcessing(pagepre: SDUPage) escaped escaped escaped() sanitized async

### **SDUDimensions**

 ${\tt sanitized()}$ 

```
Bases: SQLModel

Attributes

factor_X class-attribute

factor_y: float = 0.0

factor_y: float = 0.0

height class-attribute

height: float = 0.0
```

```
id class-attribute

id: int = -1

rotation class-attribute

rotation: int = 0

width class-attribute

width: float = 0.0

Classes

Config

Attributes

orm_mode class-attribute

orm_mode = False
```

### **SDUElement**

```
Bases: SQLModel

Attributes

end class-attribute

end: int = -1

id class-attribute

id: int

start class-attribute

start: int = -1
```

### **Classes**

### Config

```
Attributes

orm_mode class-attribute

orm_mode = False
```

### **SDUEmail**

```
Bases: SQLModel
Parsed EMail Pydantic Model.
Attributes
msg_bcc class-attribute
  msg_bcc: str = ''
msg_body class-attribute
  msg_body: str = ''
msg_cc class-attribute
  msg_cc: str = ''
msg_from class-attribute
  msg_from: str = ''
msg_headers class-attribute
  msg_headers: Dict = {}
msg_id class-attribute
  msg_id: str = ''
```

```
msg_received class-attribute
  msg_received: List = []
msg_reply_to class-attribute
  msg_reply_to: str = ''
msg_sender_ip class-attribute
  msg_sender_ip: str = ''
msg_sent_date class-attribute
  msg_sent_date: str = ''
msg_subject class-attribute
  msg_subject: str = ''
msg_timezone class-attribute
  msg_timezone: str = ''
msg_to class-attribute
  msg_to: str = ''
msg_to_domains class-attribute
  msg_to_domains: str = ''
seg_body class-attribute
  seg_body: str = ''
Seg_sign class-attribute
  seg_sign: str = ''
```

### **Classes**

### Config

```
Attributes
```

orm\_mode [class-attribute]

```
orm_mode = False
```

### **SDUFonts**

```
Bases: SQLModel
Attributes
avg_fontsize class-attribute
  avg_fontsize: int = 14
fonts [class-attribute]
  fonts: List = []
fontsizes class-attribute
  fontsizes: Dict = {}
id class-attribute
  id: int = -1
small_fontsize class-attribute
  small_fontsize: int = 10000
Classes
```

Attributes

Config

```
orm_mode class-attribute

orm_mode = False
```

### **SDULanguage**

```
Bases: SQLModel
Detected Language Pydantic Model.
Attributes
bytes class-attribute
  bytes: int = -1
code class-attribute
  code: str = 'unknown'
confidence class-attribute
  confidence: float = -1
details class-attribute
  details: Optional[Tuple] = tuple()
lang class-attribute
  lang: str = 'unknown'
proportion class-attribute
  proportion: int = -1
reliable class-attribute
  reliable: bool = False
Winner class-attribute
```

```
winner: Optional[str] = None

Classes

Config

Attributes

orm_mode class-attribute

orm_mode = False
```

### **SDULayout**

```
Bases: SQLModel
Attributes
bjson class-attribute
  bjson: Dict = {}
blocks class-attribute
  blocks: List[tuple] = []
body class-attribute
  body: SDUBBox = SDUBBox()
columns class-attribute
  columns: List[SDUBBox] = []
dimensions class-attribute
  dimensions: SDUDimensions = SDUDimensions()
drawings class-attribute
  drawings: List = []
```

```
fonts class-attribute
  fonts: SDUFonts = SDUFonts()
footer class-attribute
  footer: SDUBBox = SDUBBox()
header class-attribute
  header: SDUBBox = SDUBBox()
id class-attribute
  id: int = -1
images class-attribute
  images: List = []
layouts class-attribute
  layouts: List = []
margin_left class-attribute
  margin_left: SDUBBox = SDUBBox()
margin_right class-attribute
  margin_right: SDUBBox = SDUBBox()
rows class-attribute
  rows: List[SDUBBox] = []
texttrace class-attribute
  texttrace: List = []
```

### Classes

### Config

**Attributes** 

orm\_mode [class-attribute]

orm\_mode = False

### **SDULearnset**

```
Bases: SQLModel
Attributes
emb class-attribute
  emb: Dict = {}
nlp class-attribute
  nlp: Dict = {}
nlu class-attribute
  nlu: Dict = {}
text class-attribute
  text: Dict = {}
Vec_sent class-attribute
  vec_sent: Dict = {}
Vec_words class-attribute
  vec_words: Dict = {}
Version class-attribute
```

```
version: str = ''
    Classes
   Config
       Attributes
       orm_mode class-attribute
         orm_mode = False
    Functions
    reset
      reset()
    set_version
      set_version(version: str)
SDUPDFElement
    Bases: SQLModel
   Attributes
    bold class-attribute
```

```
bold: bool = False
```

COlor class-attribute

```
color: int = 0
```

flags class-attribute

```
flags: int = 0
```

 $font {\scriptsize ({\tt class-attribute})}$ 

```
fontsize class-attribute

fontsize: float = 0.0

italic class-attribute

italic: bool = False

line_id class-attribute

line_id: int = -1

span_id class-attribute

span_id: int = -1
```

### **SDUPage**

```
Attributes

has_en class-attribute

has_en: bool = False

input class-attribute

input: str = ''

npar class-attribute

page class-attribute

page: int = -1
```

```
text class-attribute
  text: SDUText = SDUText()
Classes
Config
    Attributes
    orm\_mode \texttt{[class-attribute]}
      orm_mode = False
Functions
getAllSentencesTextList
  getAllSentencesTextList()
getAllSentencesTextListLF
  getAllSentencesTextListLF()
get All Sentences Text List No Table And Lists \\
  {\tt getAllSentencesTextListNoTableAndLists()}
getAllSentencesTextList_en
  getAllSentencesTextList_en()
getTextDefault
  getTextDefault()
{\tt getTextForDisplay}
  getTextForDisplay()
getTextForNLP
```

```
getTextForNLP()
getTextLF
  getTextLF(space_before_lf: bool = False)
getTextLF_Paragraph
  getTextLF_Paragraph(space_before_lf: bool = False)
getTextNoLF
  getTextNoLF()
getTextNoLF_EN
  getTextNoLF_EN()
getTextNoLF_Paragraph
  getTextNoLF_Paragraph()
hasText
  hasText()
setInput
  setInput(inputText: str)
```

### **SDUPageImage**

Bases: SQLModel

Page Image Pydantic Model.

Storing the information about the Image representation of a Page.

**Attributes** 

dpi class-attribute

```
dpi: float = 0.0
filepath\_name_{\tiny{\texttt{class-attribute}}}
  filepath_name: str = ''
format class-attribute
  format: str = ''
height class-attribute
  height: float = 0.0
id class-attribute
  id: int = -1
layout class-attribute
  layout: List = []
mode_{\tiny{\texttt{class-attribute}}}
  mode: str = ''
width class-attribute
  width: float = 0.0
Classes
Config
    Attributes
    orm_mode class-attribute
       orm_mode = False
```

### **SDUParagraph**

```
Bases: SQLModel
Attributes
clean class-attribute
  clean: str = ''
elements class-attribute
  elements: List[SDUPDFElement] = []
id class-attribute
  id: int = -1
lang class-attribute
  lang: SDULanguage = SDULanguage()
nsen class-attribute
  nsen: int = 0
Section class-attribute
  section: str = 'body'
semantic_type class-attribute
  semantic_type: str = 'text'
Sentences class-attribute
  sentences: List[SDUSentence] = []
sentences_en class-attribute
```

```
sentences_en: List[SDUSentence] = []
size_type class-attribute
 size_type: str = 'body'
SOT class-attribute
  sort: int = -1
Classes
Config
   Attributes
   orm_mode [class-attribute]
      orm_mode = False
Functions
getText
  getText() -> str
getTextLF
  getTextLF() -> str
getTextNoLF
  getTextNoLF() -> str
hasText
  hasText() -> bool
```

### **SDUSentence**

Bases: SQLModel

# **Attributes** id class-attribute id: int = -1text class-attribute text: str = '' tokens class-attribute tokens: List[str] = [] UPOS class-attribute upos: List[str] = [] XPOS class-attribute xpos: List[str] = [] Classes Config **Attributes** orm\_mode [class-attribute] orm\_mode = False

### **SDUStatistic**

Bases: SQLModel

Text Statistics Pydantic Model.

**Attributes** 

avg\_character\_per\_word class-attribute

```
avg_character_per_word: float = 0
avg_letter_per_word class-attribute
  avg_letter_per_word: float = 0
avg_sentence_length class-attribute
  avg_sentence_length: float = 0
avg\_sentence\_per\_word_{\tiny{\texttt{class-attribute}}}
  avg_sentence_per_word: float = 0
avg\_syllables\_per\_word class-attribute
  avg_syllables_per_word: float = 0
coleman class-attribute
  coleman: float = 0
crawford class-attribute
  crawford: float = 0
difficult_words class-attribute
  difficult_words: int = 0
fog class-attribute
  fog: float = 0
grade class-attribute
  grade: float = 0
gulpease_index class-attribute
```

```
gulpease_index: float = 0
lexicon_count class-attribute
  lexicon_count: int = 0
long_word_count class-attribute
  long_word_count: int = 0
OSMan class-attribute
  osman: float = 0
paragraph\_count_{\tiny{\texttt{class-attribute}}}
  paragraph_count: int = 0
reading\_ease_{\tiny{\texttt{class-attribute}}}
  reading_ease: str = ''
reading_ease_score class-attribute
  reading_ease_score: float = 0
reading\_index_{\tiny{\texttt{class-attribute}}}
  reading_index: float = 0
reading_score class-attribute
  reading_score: float = 0
reading_time_s class-attribute
  reading_time_s: float = 0
sentence_count class-attribute
```

```
sentence_count: int = 0

Smog class-attribute

smog: float = 0

standard class-attribute

standard: str = ''

write_formula class-attribute

write_formula: float = 0

Classes

Config

Attributes

orm_mode class-attribute

orm_mode = False
```

### **SDUText**

```
Bases: SQLModel

Attributes

clean class-attribute

clean: str = ''

html_content class-attribute

html_content: str = ''

lang class-attribute

lang: SDULanguage = SDULanguage()
```

```
paragraphs class-attribute

paragraphs: List[SDUParagraph] = []

TaW class-attribute

raw: str = ''

structured_content class-attribute

structured_content: Dict = {}

Classes

Config

Attributes

orm_mode class-attribute

orm_mode = False
```

### **SDUVersion**

```
Bases: SQLModel

Attributes

creation_date class-attribute

creation_date: str = ''

version class-attribute

version: str = ''

Classes
```

Config

**Attributes** 

```
orm_mode class-attribute

orm_mode = False
```

### **Functions**

### getCRLF

```
getCRLF() -> str

get's the OS Environment Variable for CR_LF. Default: \n
```

### getCRParagraph

```
getCRParagraph() -> str

get's the OS Environment Variable for CR_PARAGRAPH. Default: \n\n
```

### getSentenceSeperator

```
getSentenceSeperator() -> str

get's the OS Environment Variable for SENTENCE_SEPARATOR. Default: (Space/Blank)
```

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