



UR Documentation Template

Version

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Welcome to UR Documentation Template's documentation!

Testing

Does this work in other languages? Please say yes.

get_forward_kin(q='current_joint_positions', tcp='active_tcp')

Calculate the forward kinematic transformation (joint space -> tool space) using the calibrated robot kinematics. If no joint position vector is provided the current joint angles of the robot arm will be used. If no tcp is provided the currently active tcp of the controller will be used.

Parameters

q: joint position vector (Optional)

tcp: tcp offset pose (Optional)

Return Value

tool pose

Example command: `get_forward_kin([0.,3.14,1.57,.785,0,0], p[0,0,0.01,0,0,0])`

• Example Parameters:

- $q = [0., 3.14, 1.57, .785, 0, 0]$ -> joint angles of $j_0=0$ deg, $j_1=180$ deg, $j_2=90$ deg, $j_3=45$ deg, $j_4=0$ deg, $j_5=0$ deg.
- $tcp = p[0,0,0.01,0,0,0]$ -> tcp offset of $x=0$ mm, $y=0$ mm, $z=10$ mm and rotation vector of $rx=0$ deg, $ry=0$ deg, $rz=0$ deg.

SimplePDF Debug output

This is some build environment specific output. It shall help to identify problems during the build process.

You see this output because **simplepdf_debug=True** is set on the **conf.py** file.

Sphinx

Version : 7.2.6

Srcdir : /workspaces/documentation-template/source

Confdir : /workspaces/documentation-template/source

Outdir : /workspaces/documentation-template/source/_build/simplepdf

Extensions

Used Sphinx extension can be also found in the packages list of Python, which also includes the used version.

myst_parser
sphinx_copybutton
sphinx_favicon
sphinx_multiversion
sphinx_new_tab_link
sphinx_rtd_theme
sphinx_simplepdf

SimplePDF Configs

simplepdf_vars : {'primary': '#01579B', 'primary-opaque': '1, 87, 155, 0.5', 'secondary': '#039BE5', 'cover': '#FFFFFF', 'white': '#FFFFFF', 'links': '#4FC3F7', 'cover-bg': 'url(cobots.jpeg) no-repeat center', 'cover-overlay': 'rgba(100, 181, 246, 0.8)', 'top-left-content': 'counter(page)', 'bottom-center-content': '"Custom footer content"'}

simplepdf_file_name : None

simplepdf_debug : True

simplepdf_weasyprint_timeout : None

simplepdf_weasyprint_flags : None

simplepdf_use_weasyprint_api : None

simplepdf_theme : simplepdf_theme

simplepdf_theme_options : {}

simplepdf_sidebars : {'**': ['localtoc.html']}

Python

Executable : /usr/local/bin/python

Operating System : Linux (Release: 6.6.12-linuxkit)

Packages

This chapter shows a list of installed packages in the current Python environment, which was used to build this PDF. The second value is the version number.

Important packages

PIL: unknown

sphinx: 7.2.6

sphinx_simplepdf: 1.6.0

weasyprint: 61.1

Other packages

__future__: unknown

__hello__: unknown

__phello__: unknown

_aix_support: unknown

_asyncio: unknown

_bisect: unknown

_blake2: unknown

_brotli: unknown

_bz2: unknown

_cffi_backend: unknown

_codecs_cn: unknown

_codecs_hk: unknown

_codecs_iso2022: unknown

_codecs_jp: unknown

_codecs_kr: unknown

_codecs_tw: unknown

_collections_abc: unknown

`_compat_pickle`: unknown
`_compression`: unknown
`_contextvars`: unknown
`_crypt`: unknown
`_csv`: unknown
`_ctypes`: unknown
`_ctypes_test`: unknown
`_curses`: unknown
`_curses_panel`: unknown
`_datetime`: unknown
`_dbm`: unknown
`_decimal`: unknown
`_distutils_hack`: unknown
`_elementtree`: unknown
`_gdbm`: unknown
`_hashlib`: unknown
`_heapq`: unknown
`_json`: unknown
`_lsprof`: unknown
`_lzma`: unknown
`_markupbase`: unknown
`_md5`: unknown
`_multibytecodec`: unknown
`_multiprocessing`: unknown
`_opcode`: unknown
`_osx_support`: unknown
`_pickle`: unknown
`_posixshm`: unknown
`_posixsubprocess`: unknown
`_py_abc`: unknown
`_pydatetime`: unknown
`_pydecimal`: unknown
`_pyio`: unknown
`_pylong`: unknown
`_queue`: unknown
`_random`: unknown
`_sass`: unknown
`_sha1`: unknown
`_sha2`: unknown
`_sha3`: unknown
`_sitebuiltins`: unknown
`_socket`: unknown
`_sqlite3`: unknown

_ssl: unknown
_statistics: unknown
_strptime: unknown
_struct: unknown
_sysconfigdata__linux_aarch64-linux-gnu: unknown
_testbuffer: unknown
_testcapi: unknown
_testclinic: unknown
_testimportmultiple: unknown
_testinternalcapi: unknown
_testmultiphase: unknown
_testsingephase: unknown
_threading_local: unknown
_tkinter: unknown
_uuid: unknown
_weakrefset: unknown
_xxinterpchannels: unknown
_xxsubinterpreters: unknown
_xtestfuzz: unknown
_yaml: unknown
_zoneinfo: unknown
abc: unknown
aifc: unknown
alabaster: 0.7.16
antigravity: unknown
argparse: unknown
array: unknown
ast: unknown
asyncio: unknown
audioop: unknown
babel: 2.14.0
base64: unknown
bdb: unknown
binascii: unknown
bisect: unknown
brotli: 1.1.0
bs4: unknown
bz2: unknown
calendar: unknown
certifi: 2024.2.2
cffi: 1.16.0
cgi: unknown
cgitb: unknown

charset_normalizer: 3.3.2
chunk: unknown
click: 8.1.7
cmath: unknown
cmd: unknown
code: unknown
codecs: unknown
codeop: unknown
collections: unknown
colorama: 0.4.6
colorsys: unknown
compileall: unknown
concurrent: unknown
configparser: unknown
contextlib: unknown
contextvars: unknown
copy: unknown
copyreg: unknown
cProfile: unknown
crypt: unknown
cssselect2: 0.7.0
csv: unknown
ctypes: unknown
curses: unknown
dataclasses: unknown
datetime: unknown
dbm: unknown
decimal: unknown
difflib: unknown
dis: unknown
doc8: 1.1.1
doctest: unknown
docutils: 0.20.1
email: unknown
encodings: unknown
ensurepip: unknown
enum: unknown
fcntl: unknown
filecmp: unknown
fileinput: unknown
fnmatch: unknown
fontTools: 4.49.0
fractions: unknown

ftplib: unknown
functools: unknown
genericpath: unknown
getopt: unknown
getpass: unknown
gettext: unknown
git: unknown
gitdb: 4.0.11
glob: unknown
graphlib: unknown
grp: unknown
gzip: unknown
hashlib: unknown
heapq: unknown
hmac: unknown
html: unknown
html5lib: 1.1
http: unknown
idlelib: unknown
idna: 3.6
imagesize: 1.4.1
imaplib: unknown
imghdr: unknown
importlib: unknown
inspect: unknown
io: unknown
ipaddress: unknown
jinja2: 3.1.3
json: unknown
keyword: unknown
latexcodec: 2.0.1
lib2to3: unknown
linecache: unknown
livereload: 2.6.3
locale: unknown
logging: unknown
lzma: unknown
mailbox: unknown
mailcap: unknown
markdown_it: unknown
markupsafe: 2.1.5
math: unknown
mdit_py_plugins: 0.4.0

mdurl: 0.1.2
mimetypes: unknown
mmap: unknown
modulefinder: unknown
multiprocessing: unknown
myst_parser: 2.0.0
netrc: unknown
nis: unknown
nntplib: unknown
ntpath: unknown
nturl2path: unknown
numbers: unknown
opcode: unknown
operator: unknown
optparse: unknown
os: unknown
ossaudiodev: unknown
packaging: 23.2
pathlib: unknown
pbr: 6.0.0
pdb: unknown
pickle: unknown
pickletools: unknown
pip: 24.0
pipes: unknown
pkg_resources: unknown
pkgutil: unknown
platform: unknown
plistlib: unknown
poplib: unknown
posixpath: unknown
pprint: unknown
profile: unknown
pstats: unknown
pty: unknown
py_compile: unknown
pybtex: 0.24.0
pybtex_docutils: 1.0.3
pyclbr: unknown
pyparser: 2.21
pydoc: unknown
pydoc_data: unknown
pydyf: 0.9.0

pyexpat: unknown
pygments: 2.17.2
pyphen: 0.14.0
pysassc: unknown
queue: unknown
quopri: unknown
random: unknown
re: unknown
readline: unknown
reprlib: unknown
requests: 2.31.0
resource: unknown
restructuredtext_lint: 1.4.0
rlcompleter: unknown
rst2html: unknown
rst2html4: unknown
rst2html5: unknown
rst2latex: unknown
rst2man: unknown
rst2odt: unknown
rst2odt_prepstyles: unknown
rst2pseudoxml: unknown
rst2s5: unknown
rst2xetex: unknown
rst2xml: unknown
rstpep2html: unknown
runpy: unknown
sass: unknown
sasstests: unknown
sassutils: unknown
sched: unknown
secrets: unknown
select: unknown
selectors: unknown
setuptools: 69.0.3
shelve: unknown
shlex: unknown
shutil: unknown
signal: unknown
site: unknown
six: 1.16.0
smmap: 5.0.1
smtplib: unknown

sndhdr: unknown
snowballstemmer: 2.2.0
socket: unknown
socketserver: unknown
soupsieve: 2.5
sphinx_autobuild: 2021.3.14
sphinx_copybutton: 0.5.2
sphinx_favicon: 1.0.1
sphinx_intl: 2.1.0
sphinx_multiversion: 0.2.4
sphinx_new_tab_link: 0.2.1
sphinx_numfig: 0.1.1
sphinx_rtd_theme: 2.0.0
sphinx_sitemap: 2.5.1
sphinx_tabs: 3.4.5
spwd: unknown
sqlite3: unknown
sre_compile: unknown
sre_constants: unknown
sre_parse: unknown
ssl: unknown
stat: unknown
statistics: unknown
stevedore: 5.2.0
string: unknown
stringprep: unknown
struct: unknown
subprocess: unknown
sunau: unknown
symtable: unknown
sysconfig: unknown
syslog: unknown
tabnanny: unknown
tarfile: unknown
telnetlib: unknown
tempfile: unknown
termios: unknown
tests: unknown
textwrap: unknown
this: unknown
threading: unknown
timeit: unknown
tinycss2: 1.2.1

tkinter: unknown
token: unknown
tokenize: unknown
tomllib: unknown
tornado: 6.4
trace: unknown
traceback: unknown
tracemalloc: unknown
tty: unknown
turtle: unknown
turtledemo: unknown
types: unknown
typing: unknown
unicodedata: unknown
unittest: unknown
urllib: unknown
urllib3: 2.2.1
uu: unknown
uuid: unknown
venv: unknown
warnings: unknown
wave: unknown
weakref: unknown
webbrowser: unknown
webencodings: 0.5.1
wheel: 0.42.0
wsgiref: unknown
xdrlib: unknown
xml: unknown
xmlrpc: unknown
xxlimited: unknown
xxlimited_35: unknown
xxsubtype: unknown
yaml: unknown
zipapp: unknown
zipfile: unknown
zipimport: unknown
zlib: unknown
zoneinfo: unknown
zopfli: 0.2.3

