

PDL Quick Reference

pip install prompt-declaration-language

pdl examples/hello/hello.pdl

LLM call with current context

model: watsonx/ibm/granite-13b-chat-v2
parameters:
 temperature: 0.1

LLM call with explicit input

model: watsonx/ibm/granite-13b-chat-v2
parameters:
 temperature: 0.1
input:
 array:
 - **role:** user
 content: Hello,

Reading from a file or stdin

read: *# optionally, add file name*
message: Please enter an input.
multiline: true *# omit to stop at \n*

Creating data (v1, v2 can be any block)

text: *# outputs "v1v2"*
 - v1
 - v2

lastOf: *# outputs v2*
 - v1
 - v2

array: *# outputs [v1, v2]*
 - v1
 - v2

object: *# outputs {k1: v1, k2: v2}*
 k1: v1
 k2: v2

data: *# outputs {k1: v1, model: v2}*
 k1: v1
 model: v2 *# no LLM call*

Importing a PDL file

import: helper_defs

Declaring and calling functions

def: add
function:
 x: int
return: \${x + x}

call: \${add}
args:
 x: 2
 pdl_context: [] *# optional*

Control constructs

if: \${x > 0}
then: positive
else: non-negative

match: \${x}
with:
 - **case:** one
 then: 1
 - **case:** two
 then: 2

for: *# outputs 2_0_5*
 i: [1, 0, 1]
 j: [2, 3, 5]
repeat: \${i * j}
join:
 with: _ *# optional*

repeat: Hi *# outputs ["Hi", "Hi", "Hi"]*
join:
 as: array
maxIterations: 3

repeat:
 def: x
 read:
until: \${ (x | trim) == "stop" }

Executing code

lang: python *# or jinja, pdl*
code: result = "Hello, world!"

Optional keywords for any block

description: documentation text

def: x *# define variable from block*

defs: *# define multiple variables*
 x: v1
 y: v2

role: user *# or system or assistant*

contribute: [result, context] *# or less*

parser: json *# or jsonl, yaml, regex*

spec: type *# type specification*

spec Types (shorthand for JSON Schema)

Basic types	string, integer, number, boolean, "null"
Arrays	[int]
Objects	{x: int, y: int}
Enums	{enum: [red, green, blue]}
Json Schema	{type: string, pattern: ^a}
Any type	null

\${...} Expressions (subset of Jinja2)

Basic values	"hi", 5, 3.1, true, none
Arrays	[1, 2, 3]
Objects	{"x": 4, "y": 5}
Variables	x, y[0], z.f
Operators	+, -, *, /, //, %, **, ~, and, or, not, ==, <, >, in
Tests	x if x is defined else 0
Filters	x default(0)